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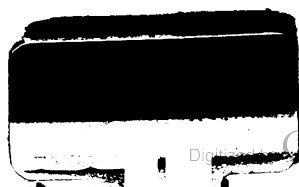
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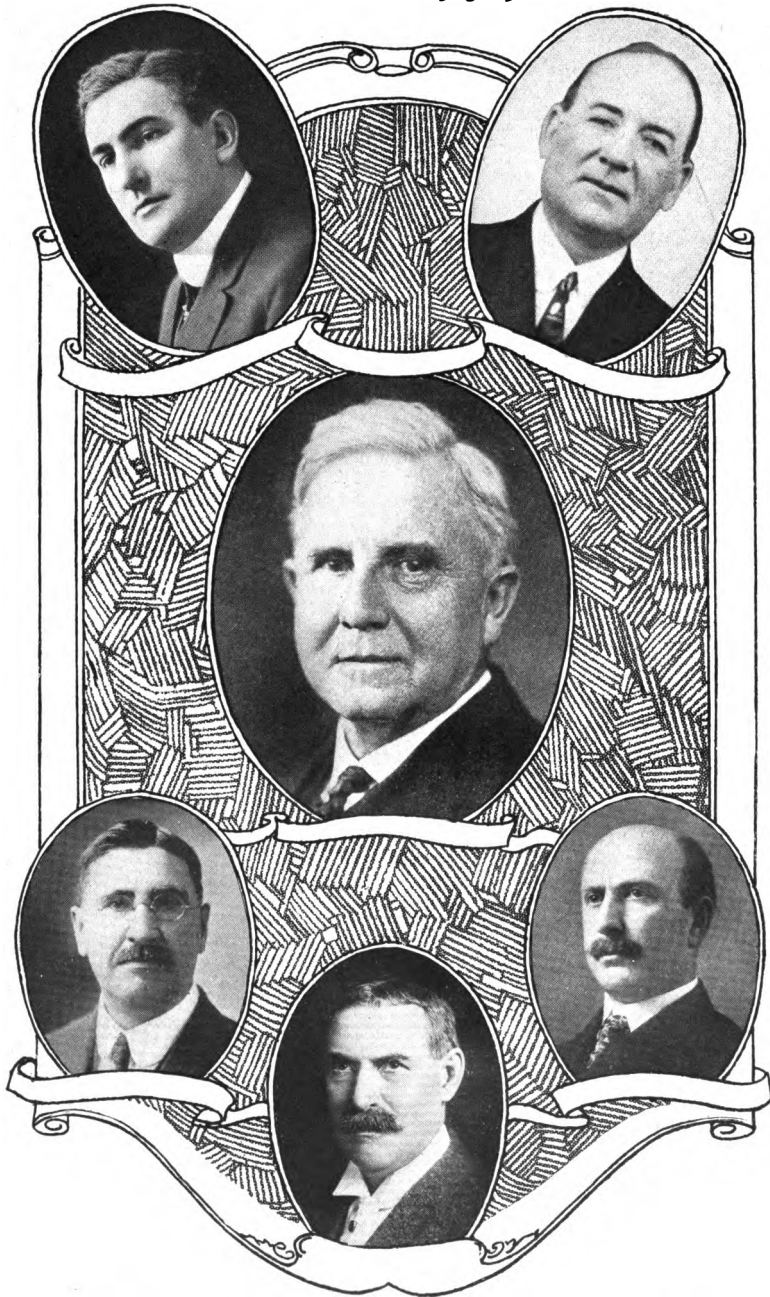


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GEORGE E. CARSON
Claims

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Transportation and Traffic

1915-16

YEAR BOOK

OF THE

AMERICAN ELECTRIC RAILWAY ASSOCIATION

AND ITS

AFFILIATED ASSOCIATIONS

THE AMERICAN ELECTRIC RAILWAY
ACCOUNTANTS' ASSOCIATION

THE AMERICAN ELECTRIC RAILWAY
ENGINEERING ASSOCIATION

THE AMERICAN ELECTRIC RAILWAY
CLAIMS ASSOCIATION

THE AMERICAN ELECTRIC RAILWAY
TRANSPORTATION AND TRAFFIC ASSOCIATION

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CODE OF PRINCIPLES

ADOPTED BY THE AMERICAN ELECTRIC RAILWAY ASSOCIATION,
AT ITS THIRTY-THIRD ANNUAL CONVENTION HELD IN
ATLANTIC CITY, N. J., OCTOBER 12 TO 16, 1914.

I

THE first obligation of public utilities engaged in transportation is service to the public.

The first essential of service is safety.

Quality of service must primarily depend upon the money received in fares. For this reason it is necessary that the rate of fare should be sufficient to permit the companies to meet the reasonable demands of patrons and to yield a fair return on a fair capitalization.

2

REGULATED private ownership and operation of electric railways is more conducive to good service and the public welfare than government ownership and operation because the latter are incompatible with administrative initiative, economy and efficiency, and with the proper development of cities through the extension of transportation lines. The interests of the public are fully protected by the authority given to regulatory bodies.

3

IN the interest of the public and good service local transportation should be a monopoly and should be subject to regulation and protection by the state rather than by local authorities.

4

SHORT-TERM franchises are detrimental to civic welfare and growth because they ultimately check the extension of facilities and discourage good service.

5

IN order to render good service, electric railways must be allowed to earn a fair return on a fair capitalization, and the foundation for this result will be obtained, if the issuance and sale of securities representing such fair capitalization shall be legally authorized on such terms as will produce the requisite funds.

6

SECURITIES which have been issued in accordance with the law as it has been interpreted in the past should be valid obligations on which an electric railway is entitled to a fair return.

7

THE relation of adequate wages to efficient operation should always be recognized, but electric railways, being public servants regulated by public authorities, should be protected against excessive demands of labor and strikes.

8

THE principle of ownership of securities of local companies by centralized holding companies is economically sound for the reason that the securities of the latter have protection against the varying business conditions of a single locality or company and because money for construction and improvements can thus be more readily obtained.

9

IN the appraisal of an electric railway for the purpose of determining reasonable rates, all methods of valuation should have due consideration.

10

FULL and frank publicity should be the policy of all transportation companies to the end that proper information may be available to the investor and the public.

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.....1905-1906
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H. G. SALISBURY, Architect and Structural Engineer, Toronto Railway Co., Toronto, Ont., Can.

JAMES LINK, Chief Engineer, Knoxville Railway & Light Co., Knoxville, Tenn.

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- G. W. PALMER, JR., Electrical Engineer, Bay State Street Railway Co., Boston, Mass.
- E. B. KATTÉ, Chief Engineer, Electric Traction, New York Central & Hudson River Railroad Co., New York, N. Y.
- E. J. BLAIR, Electrical Engineer, Metropolitan West Side Elevated Railway Co., Chicago, Ill.

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- W. E. JOHNSON, Engineer of Car Construction, Brooklyn Rapid Transit System, Brooklyn, N. Y.
- W. W. BROWN, Superintendent Elevated Car Equipment, Brooklyn Rapid Transit System, Brooklyn, N. Y.
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W. G. GOVE, Superintendent of Equipment, Brooklyn Rapid Transit System, Brooklyn, N. Y.

J. S. McWHIRTER, Superintendent of Equipment, Third Avenue Railway Co., New York, N. Y.

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MARTIN SCHREIBER, Engineer Maintenance of Way, Public Service Railway Company, Newark, N. J.

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C. H. CLARK, Engineer Maintenance of Way, the Cleveland Railway Co., Cleveland, Ohio.

R. C. CRAM, Assistant Engineer, Brooklyn Rapid Transit System, Brooklyn, N. Y.

C. L. CADLE, Electrical Engineer, New York State Railways, Rochester, N. Y.

C. R. HARTE, Construction Engineer, The Connecticut Company, New Haven, Conn.

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J. H. HANNA, Vice-President, Capital Traction Co., Washington, D. C.

MARTIN SCHREIBER, Engineer Maintenance of Way, Public Service Railway Co., Newark, N. J.

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A. E. HARVEY, Chief Engineer, Metropolitan Street Railway Co., Kansas City, Mo.

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 M. S. SLOAN, General Manager, New Orleans Railway & Light Co., New Orleans, La.
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White Management Corporation, New
York, N. Y.

H. C. DONECKER, Assistant General
Manager, Public Service Railway Co.,
Newark, N. J.

TRAINING OF TRANSPORTATION EMPLOYEES

Chairman, N. W. BOLEN, General Su-
perintendent, Public Service Railway
Co., Newark, N. J.

C. B. BUCHANAN, General Manager,
Virginia Railway & Power Co., Rich-
mond, Va.

M. J. FERON, General Superintendent,
Metropolitan West Side Elevated
Railway Co., Chicago, Ill.

J. T. CONWAY, General Superintendent,
Bay State Street Railway Co., Bos-
ton, Mass.

W. C. SPARKS, Vice-President and Gen-
eral Manager, Rockford & Interurban
Railway Co., Rockford, Ill.

UNIFORM DEFINITIONS

Chairman, J. V. SULLIVAN, Statistician,
Chicago Surface Lines, Chicago, Ill.
FREDERIC NICHOLAS, Forest Glen Gar-
dens, Long Island, N. Y.

WM. C. GREENOUGH, Worcester Poly-
technic Institute, Worcester, Mass.

JOINT COMMITTEES**ACCOUNTANTS' AND ENGINEERING****ENGINEERING—ACCOUNTING****ACCOUNTANTS**

Co-Chairman, F. H. SILLICK, Comp-
troller, Hudson & Manhattan Rail-
road Co., New York, N. Y.

C. E. MURRAY, Secretary, Toledo Rail-
ways & Light Co., Toledo, O.

J. C. COLLINS, Secretary and General
Auditor, New York State Railways,
Rochester, N. Y.

C. H. LAHR, Auditor, Northern Ohio
Traction & Light Co., Akron, O.

H. A. GIDNEY, Auditor, Barre & Mont-
pelier Traction & Light Co., Boston,
Mass.

ENGINEERING

Co-Chairman, L. P. CRECELIUS, Elec-
trical Engineer, The Cleveland Rail-
way Co., Cleveland, Ohio.

J. P. RIPLEY, Assistant to President,
The J. G. White Management Corpo-
ration, New York, N. Y.

HAROLD BATES, Assistant Engineer, The
Connecticut Co., New Haven, Conn.

NORMAN LITCHFIELD, Equipment Engi-
neer, Interborough Rapid Transit Co.,
New York, N. Y.

E. P. ROUNDEVY, Engineer Maintenance
of Way, New York State Railways,
Syracuse, N. Y.

LIFE OF RAILWAY PHYSICAL PROPERTY

ACCOUNTANTS

- Co-Chairman*, R. N. WALLIS, Treasurer, Fitchburgh & Leominster Street Railway Co., Fitchburgh, Mass.
 A. R. PATTERSON, Auditor, Northern Texas Traction Co., Boston, Mass.
 J. M. SMITH, Comptroller, The Toronto Railway Co., Toronto, Can.

ENGINEERING

- Co-Chairman*, MARTIN SCHREIBER, Engineer Maintenance of Way, Public Service Railway Co., Newark, N. J.
 J. H. HANNA, Vice-President, Capital Traction Co., Washington, D. C.
 C. F. BANCROFT, Superintendent of Motive Power and Machinery, Bay State Street Railway Co., Boston, Mass.

CLAIMS ACCOUNTING

ACCOUNTANTS

- Co-Chairman*, H. J. DAVIES, Secretary and Treasurer, The Cleveland Railway Co., Cleveland, Ohio.
 GEORGE B. CADE, Secretary, Assistant Treasurer and Claim Agent, Atlantic Coast Electric Railway Co., Asbury Park, N. J.
 H. S. SWIFT, Treasurer, West Penn Traction Co., Pittsburgh, Pa.

CLAIMS

- H. K. BENNETT, Claim Agent, Fitchburgh & Leominster Street Railway Co., Fitchburgh, Mass.
 JAMES R. PRATT, Assistant General Manager, United Railways & Electric Co., Baltimore, Md.
 H. V. DROWN, General Claim Agent, Public Service Railway Co., Newark, N. Y.

ACCOUNTANTS' AND TRANSPORTATION AND TRAFFIC ASSOCIATIONS

TRANSPORTATION ACCOUNTING

ACCOUNTANTS

- Co-Chairman*, A. E. DEDRICK, Auditor, Mahoning & Shenango Railway & Light Co., Youngstown, O.
 GEORGE W. KALWEIT, Auditor, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.
 W. O. INGLE, Auditor, New York State Railways, Rochester, N. Y.

TRANSPORTATION AND TRAFFIC

- Co-Chairman*, E. B. PECK, Vice-President and Comptroller, Indianapolis Traction & Terminal Co., Indianapolis, Ind.
 A. SWARTZ, Vice-President, The Toledo & Western Railroad Co., Sylvania, Ohio.
 E. C. FABER, Vice-President, Aurora, Elgin & Chicago Railroad Co., Aurora, Ill.

ENGINEERING AND TRANSPORTATION AND TRAFFIC

BLOCK SIGNALS FOR ELECTRIC RAILWAYS

ENGINEERING

- Chairman*, J. M. WALDRON, Signal Engineer, Interborough Rapid Transit Co., New York, N. Y.
 J. LEISENRING, Superintendent of Overhead Lines, Illinois Traction System, Peoria, Ill.
 G. N. BROWN, Electrical Engineer, New York State Railways, Syracuse, N. Y.
 J. B. STEWART, JR., Safety and Efficiency Engineer, Mahoning & Shenango Railway & Light Co., Youngstown, Ohio.

TRANSPORTATION AND TRAFFIC

- Vice-Chairman*, J. W. BROWN, Assistant General Superintendent, Public Service Railway Co., Newark, N. J.
 J. J. DOYLE, General Manager, Washington, Baltimore & Annapolis Electric Railroad Co., Baltimore, Md.
 F. W. COEN, General Manager, Lake Shore Electric Railway Co., Sandusky, Ohio.
 G. K. JEFFRIES, General Superintendent, Terre Haute, Indianapolis & Eastern Traction Co., Indianapolis, Ind.

TRANSPORTATION ENGINEERING

ENGINEERING

- J. W. ALLEN, Acting Electrical Engineer, Boston Elevated Railway Co., Boston, Mass.
 F. R. PHILLIPS, Superintendent of Equipment, Pittsburgh Railways Co., Pittsburgh, Pa.
 W. J. HARVIE, Chief Engineer, Allen & Peck, Inc., Syracuse, N. Y.

TRANSPORTATION AND TRAFFIC

- Co-Chairman*, W. A. CARSON, General Manager, Evansville Railways Co., Evansville, Ind.
 P. N. JONES, General Manager, Pittsburgh Railways Co., Pittsburgh, Pa.
 C. F. HEWITT, General Manager, United Traction Co., Albany, N. Y.

SUMMARIZED HISTORY OF THE AMERICAN ELECTRIC RAILWAY ASSOCIATION AND ITS AFFILIATED ASSOCIATIONS

The American Street Railway Association was organized at a meeting held in Boston on December 12th and 13th, 1882.

Offices of the Association were opened at the corner of Atlantic and Third avenues, Brooklyn, where they were continued until 1892.

Offices of the Association were opened at 166 Montague street, Brooklyn, in 1892 and continued there until 1895.

The first exhibition of electric railway supplies and devices was given in Washington in 1888. The first exhibit organized on a large scale was held in the Milwaukee Industrial Exposition building, in connection with the Convention of 1893.

The Street Railway Accountants' Association of America was organized at a meeting held in Cleveland, O., March 23d and 24th, 1897.

The American Railway Mechanical and Electrical Association was organized at a meeting held in Cleveland, O., February 16, 1903.

At the Convention of the American Street Railway Association at Saratoga in 1903, a committee of five manufacturers was appointed and empowered to add five others for the purpose of reporting on a plan of organization, under which the annual exhibit, should be taken charge of by the manufacturers, under whose directions, also, the entertainment at future conventions should be given.

On February 29th, the plan of organization reported by this Committee was accepted by the American Street Railway Association, which appointed a subcommittee to act with the manufacturers.

The Street Railway Claim Agents' Association of America was organized at a meeting held in St. Louis, Mo., October 12, 1904.

At a meeting held in Philadelphia, Pa., September 27 and

28, 1905, the present form of organization, consisting of a parent organization, surrounded by affiliated and allied associations was adopted. At the same meeting, the name of the American Street Railway Association was changed to the American Street and Interurban Railway Association and the following styles adopted for the affiliated Associations: The American Street and Interurban Railway Accountants' Association, The American Street and Interurban Railway Engineering Association and the American Street and Interurban Railway Claim Agents' Association.

The first exhibition, under the direction of the Manufacturers' Association was held at the Philadelphia Convention of 1905.

A secretary to devote all his time to the Association's affairs was appointed on September 29, 1905.

Permanent offices for the Association were opened at 60 Wall street, New York, N. Y., in October, 1905.

On April 27, 1906, a Constitution and By-Laws was adopted by the Manufacturers, who thus formed a permanent organization, under the title of the American Street and Interurban Railway Manufacturer's Association.

The permanent headquarters of the Association, were moved to the Engineering Societies' Building, 29 West 39th street in February, 1907.

The American Street and Interurban Railway Transportation Association was organized at a meeting held in New York on January 30, 1908.

At the 1910 convention of the Parent Association held in Atlantic City, October 10th to 14th, its name was changed to The American Electric Railway Association and the names of the affiliated and allied associations, altered to comply with such change.

At the 1912 convention of the American Electric Railway Claim Agents' Association held in Chicago, October 7th to 11th, the name of this association was changed to The American Electric Railway Claims Association.

AERA, the official monthly magazine of the Association, began its existence with the August, 1912, issue.

The Bureau of Fare Research of the Association was inaugurated in May, 1914 and discontinued December 31, 1915.

The headquarters of the Association were moved to 8 West 40th Street, New York, June 1, 1915.

For officers of the various Associations by years, see page 89.

For list of members serving as officers of the various Associations alphabetically arranged, see page 123.

For date and place of Convention of various Associations since organization, see page 133.

FORM OF ORGANIZATION

The form of organization of the American Electric Railway Association embraces the idea of a central directing body, having general jurisdiction over the activities of certain affiliated and allied bodies, the central body performing certain functions exclusively its own and leaving to its affiliated and allied organizations the consideration of the questions with which they were organized to deal, giving to them a very large scope in matters involving administration, organization and internal government.

The central body is The American Electric Railway Association. Its affiliated organizations are, The American Electric Railway Accountants' Association, The American Electric Railway Engineering Association, The American Electric Railway Claims Association and The American Electric Railway Transportation and Traffic Association. Its allied association is The American Electric Railway Manufacturers' Association.

For the constitutions and by-laws of the various Associations, see: American, page 137; Accountants', page 146; Engineering, page 150; Claims, page 156; Transportation and Traffic, page 160.

MEMBERSHIP

Membership, is of four classes, Company, Foreign Company, Individual, Company Section. Company membership, embraces membership in both the parent and affiliated associations.

Foreign Membership is confined to urban and interurban railway companies, or lessees, or individual owners of urban and interurban railways or electrified sections of steam railways, located outside of the United States, its possessions, Canada and Mexico. Each such member is entitled to one vote.

The Voting Privilege is confined to company members, whose ballots are cast through delegates duly accredited to each Association. Each Member Company has one vote.

Company Members have the privilege of sending as many delegates to the convention of the Associations as they may desire.

For list of company members alphabetically arranged with their officers, see page 164. For list geographically arranged, see page 195. For **Company Members of the Manufacturers' Association**, see page 253.

Individual Members of the Associations, consist of officers and employes of Member Companies, officers and employes of Member Companies of the Manufacturing Association and others (but not officers or employes of Non-Member Companies), who are interested in electric railways.

Individual Members have many of the rights and privileges of Member Companies. They have, however, no vote.

Company Section Members consist of members of duly organized Company Sections, and may affiliate with any of the affiliated associations, in accordance with the Constitutions and By-Laws of such organizations. They have all the privileges of Individual Members with the exception, that they receive only such publications as the Executive Committee of the Parent Association may elect.

For list of **Individual Members**, see page 204.

MAKE-UP OF EXECUTIVE COMMITTEE

To secure a close relationship between the parent and its affiliated Associations, provision is made in the constitution of the American Association for the representation on its Executive Committee of each affiliated Association. The constitutions of the affiliated Associations, provide that their Presidents shall ex-officio be such representative.

DUES AND ADMISSION FEES

The admission fee of Member Companies and Foreign Members are \$10, payable in advance.

Individual and Company Section members pay no admission fee.

DUES

Member Companies: The dues of Member Companies are based upon their gross receipts from railway operation for the fiscal year preceding the date upon which dues become payable. The following is the schedule:

GROSS RECEIPTS FROM RAILWAY OPERATION.	ANNUAL DUES.
Under \$50,000.....	\$25
Between \$50,000 and \$100,000.....	50
Between \$100,000 and \$250,000.....	75
Between \$250,000 and \$500,000.....	125
Between \$500,000 and \$1,000,000.....	175
Between \$1,000,000 and \$2,000,000.....	225
Between \$2,000,000 and \$3,000,000.....	275
Between \$3,000,000 and \$4,000,000.....	325
Between \$4,000,000 and \$5,000,000.....	375
Between \$5,000,000 and \$6,000,000.....	425
Between \$6,000,000 and \$7,000,000.....	475
Between \$7,000,000 and \$8,000,000.....	525
Between \$8,000,000 and \$9,000,000.....	575
Between \$9,000,000 and \$10,000,000.....	650
\$10,000,000 and over.....	<u>750</u>

Foreign Companies: The dues of Foreign Members are based upon their gross receipts from railway operation for the fiscal year preceding the date upon which dues become payable. The minimum is \$25 for all companies whose gross receipts from railway operation are less than \$250,000. The following schedule applies to those having gross receipts of \$250,000 or more:

GROSS RECEIPTS FROM RAILWAY OPERATION.	ANNUAL DUES.
Between \$250,000 and \$500,000.....	\$37.50
Between \$500,000 and \$1,000,000.....	50.00
Between \$1,000,000 and \$2,000,000.....	75.00
Between \$2,000,000 and \$3,000,000.....	100.00
Between \$3,000,000 and \$4,000,000.....	125.00
Between \$4,000,000 and \$5,000,000.....	150.00
Between \$5,000,000 and \$6,000,000.....	175.00
Between \$6,000,000 and \$7,000,000.....	200.00
Between \$7,000,000 and \$8,000,000.....	225.00
Between \$8,000,000 and \$9,000,000.....	250.00
Between \$9,000,000 and \$10,000,000.....	275.00
\$10,000,000 and over.....	<u>300.00</u>

Individual Members: The dues of all individual members are \$5 per year.

Company Section Members: The dues of Company Section Members are \$2 per year.

SCOPE AND WORK OF ASSOCIATIONS

WORK AND AFFILIATIONS

Individual and Company Section Members may affiliate with such association as they choose, subject to the Constitution and By-laws of such organizations, or may upon payment of dues to each, affiliate with two or more associations. In general, the scope of the various associations and the class of officers embraced in their membership is:

American Association

Scope: In general the fulfillment of the object set forth in the Section B of Clause II of the Constitution as follows: "The establishment and maintenance of a spirit of co-operation among the members and the encouragement of friendly relations between the companies and the public" and in particular the consideration of matters concerning general welfare, public policy, fares, taxation, insurance, general policy and kindred subjects."

Usual Affiliation: Presidents, vice-presidents, directors, general managers, general attorneys and other general officers.

Accountants' Association

Scope: The consideration of questions relative to the standardization of accounts and reports and other matters relating to accounting for electric railways.

Usual Affiliation: Secretaries, treasurers, comptrollers, auditors, individuals regularly employed in the accounting departments of electric railways and individuals interested in accounting matters for electric railways.

Engineering Association

Scope: The consideration of engineering questions covering construction and maintenance of electric railway equipment and apparatus, standardization, block signals, multiple-unit operation, etc.

Usual Affiliation: Chief engineers, mechanical engineers, electrical engineers, civil engineers, signal engineers, superintendents of rolling stock, superintendents of equipment, superintendents of power, superintendents of roadway, superintendents of line construction, superintendents of motive power, master mechanics, inspectors, foremen, draftsmen, electricians, architects, purchasing agents, storekeepers and assistants to any of these officers.

Claims Association

Scope: The consideration of work for the prevention of accidents, the reduction of the damages account, the maintenance of an index bureau service and other matters relating to the claims department of an electric railway.

Usual Affiliation: Claim agents, claim adjusters, claim attorneys and other persons employed in or by the claim departments of electric railways or steam roads having electrified sections.

Transportation and Traffic Association

Scope: The consideration of general operating methods in detail, rules, freight and express, time-tables, the hiring and training of employes, block signals, multiple-unit operation, and other matters relative to traffic and transportation.

Usual Affiliation: General managers, managers, superintendents, division superintendents, superintendents of transportation, traffic managers, passenger agents, express agents, freight agents, publicity managers, superintendents of inspection, traffic inspectors, dispatchers, supervisors, trainmasters, statisticians, superintendents of schedules and other employes concerned with traffic and transportation.

SECTIONAL ASSOCIATIONS

To avoid duplication of work and to knit together all organizations having as their general purpose the advancement of electric railway interests, and to establish cooperation between the American Electric Railway Association and other organizations, representing sections of the United States and foreign countries, provision for close relationship with such organizations is made. When membership in such associations, is confined to Member Companies and individual members of the American Electric Railway Association, such organizations may become affiliated with the parent association, and their presidents in this event, become ex-officio members of the Committee on Sectional Associations. (See Clause (d) of Article III of the Constitution of the American Association, page 138.)

COMPANY SECTIONS

Company Sections may be formed on the property of any member company or group of member companies, provided the membership be confined to company and individual members of the parent association. A committee of the parent association looks after the organization and interest of such sections.

The Work of Company Sections forms an important part of the activities of this association. The advantages claimed for them are:

They give an opportunity for each member to attend meetings, to prepare, read and discuss papers, thus adding to his knowledge, enlarging his field of activity and developing him in an educational way.

They give an opportunity for the discussion of specific problems relating to the company of which they are a part and by educating

the employe along these lines, increase his value to the company and to himself.

They impress the employes with the necessity and desirability of thought and study, of making themselves better workmen, better engineers and better employes if they are to advance their own interests and the companies' interests.

The meetings bring the department heads in touch with each other and with their subordinates.

The meetings give company officers the opportunity of instilling into employes a knowledge of the problems to be met and solved, the importance of co-operation and the part which they must play in bettering relations with the public.

Company sections, develop missionaries among employes, to spread the gospel of fair play as opposed to prejudice among the public.

Three Kinds of Company Sections

The report of the Committee on Company Sections, made to the 1912 Convention, was referred to the Executive Committee and adopted. It provides:

1. That there shall be three kinds of Company Sections, as follows:

(a) A Company Section organized by a Member Company conducting only an electric railway business, or a Member Company desiring to organize a Company Section composed only of its railway employes, the membership of such a Company Section to be confined to the railway employes of such a Member Company.

(b) A Company Section organized by a Member Company having, or desiring to have, a Company Section in some other similar Association, like the National Electric Light Association. For such a Company Section a charter will be issued by the American Electric Railway Association for a Joint Company Section, the dues of only those members engaged in the railway part of the work to go to the American Electric Railway Association.

(c) A Company Section organized as a Combined Company Section. This kind of Section applies to small companies having a limited number of employes, not deemed sufficient in number to form a Company Section. Such a company may form a Combined Company Section with other railway companies in the vicinity, if said railway companies are members of the American Electric Railway Association.

2. That dues for members of Company Sections are payable in advance, but no member of a Company Section is to be required to pay the annual Association dues of \$2.00 oftener than once every year. For example, the fiscal year of the Association closes October 31st; a member of a Company Section paying the annual dues of \$2.00 in advance, say, on September 1, 1914, will not be required to make the next annual payment until September 1, 1915.

3. Company Sections are numbered in the order in which they are organized and the Secretary of the Association issues to each Company Section a "Certificate of Organization," of the form adopted by the Committee.

Model Constitution for Company Sections

The Committee on Company Sections has prepared for use of those interested in the organization of Company Sections a model Constitution and By-Laws, to serve as a guide. The draft follows:

ARTICLE I.

NAME.

The name of this association shall be _____
Company Section of the American Electric Railway Association.

ARTICLE II.

OBJECT.

The object of this association shall be to foster and promote the common interests of its members and to advance scientific and practical knowledge in all matters relating to the electric railway industry; also to establish cordial and beneficial relations with kindred associations and between the members of this Section.

ARTICLE III.

MEMBERSHIP.

Section 1. Any officer or employe of the _____ Company, or its associated or controlled companies, who is a member of the American Electric Railway Association shall be eligible for membership in this Section.

Section 2. Every applicant shall signify his desire to the Secretary and, if not already a member of the American Electric Railway Association, shall enclose the requisite fee. All applications for membership shall be referred to the Executive Council, a two-thirds vote of the members of the Executive Council by ballot being necessary to election. In case of rejection the membership fee accompanying the application shall be returned.

Section 3. There shall be no membership dues other than those required for membership in the American Electric Railway Association, and a member shall only be required to pay one year's dues in any twelve months.

ARTICLE IV.

OFFICERS.

Section 1. The officers of this Section shall be a President, a Vice-President, a Secretary, a Treasurer, and there shall be at least four Directors. These officers and directors shall form the Executive Council.

Section 2. The officers and directors (except one Director as provided for in Section 3 of this article), shall be elected by ballot at the annual meeting of the Section, hereinafter provided for, and shall continue in office for a period of one year (except elective Directors whose terms shall be three years) or until their successors are regularly elected and have accepted. Their term of office shall commence at the close of the annual meeting at which they were elected. Any office becoming vacant, shall be filled by a member elected by the remaining members of the Executive Council.

Section 3. An official of the Company to be designated by the Company shall be a Director Ex-Officio. The other three initial Directors shall be elected for terms of one year, two years and three years respectively, and one Director each year thereafter for a term of three years.

Section 4. The duties of the officers shall be those usually appertaining to the offices designated. The Executive Council shall have charge of the work of the Section and shall so conduct affairs as best to fulfill the object of the Section.

ARTICLE V.

COMMITTEES.

Section 1. There shall be at least two standing committees, a Program Committee and a Membership Committee, appointed by the Executive Council immediately after the annual meeting each year and serving for a term of one year. Special committees may be appointed by the President, when authorized by motion passed by the Executive Council or by the Section.

Section 2. The Program Committee shall consist of three members. It shall be the duty of this committee to make all arrangements for providing a program for each meeting, and this committee shall report to the Executive Council at least two months in advance on what has been provided, for each particular meeting.

Section 3. The Membership Committee shall consist of not less than one member from each department of the Company represented in this Section. It shall be the duty of each individual of this Committee to use his best efforts to obtain new members especially in his own department. This committee shall report to the Executive Council at least twice each year.

ARTICLE VI.

MEETINGS.

Section 1. The regular meetings shall be held at such time and place as may be decided upon by the Executive Council.

Section 2. The annual meeting of the Section shall be held at the first regular meeting period after the regular annual Convention of the American Electric Railway Association.

Section 3. Special meetings of the Section for the transaction of business or for other purposes may be held at the discretion of the Executive Council.

Section 4. Notices of all meetings shall be sent by the Secretary at least one week before the date of such meeting to each Department represented in the Section.

Section 5. A record shall be made of the proceedings of each meeting and shall be kept on file for reference of Section members.

Section 6. Order of Business.

The regular order of business shall be:

- (a) Reading of minutes of last meeting.
- (b) Report of the Executive Council.
- (c) Address of the President.
- (d) Report of the Treasurer.
- (e) Reports of standing committees.
- (f) Reports of special committees.
- (g) Reading and discussion of papers.
- (h) General business.
- (i) Election of officers.

ARTICLE VII.

GENERAL.

Section 1. One-third of the members of this Section shall constitute a quorum at any regular meeting. No business other than the presentation of papers and discussion shall be conducted with less than a quorum present. A majority of the members of the Executive Council shall constitute a quorum at any meeting of the Executive Council.

Section 2. A majority of members present at any meeting of the Section or of the Executive Council shall determine the result of a vote (except as provided for in Article IX, Section 1).

Section 3. Robert's Rules of Order shall be the governing parliamentary law of the Section, in all cases not definitely provided for by the Constitution or By-Laws.

ARTICLE VIII.

BY-LAWS AND RULES.

Section 1. The Section may adopt such rules for the conduct of the meetings and By-Laws for the details of the conduct of its affairs as may be found necessary from time to time.

ARTICLE IX.

AMENDMENTS.

Section 1. A proposed amendment to this Constitution must be signed by at least two-thirds of the members of the Section and offered in writing at a regular meeting of the Section and shall be voted upon at the next regular meeting. The proposed amendment shall be included in the notice of the meeting at which it is to be voted upon. A two-thirds vote of the members present shall be required for the adoption of an amendment.

How to Organize a Company Section.

For the organization of a company section upon the property of any Member Company or group of Member Companies, application should be made to the Chairman of the Committee on Individual Membership and Company Sections. A properly engrossed charter, signed by the President and Secretary of the Association will be forwarded after the application has been endorsed.

A list of Company Sections, now in existence, together with the date of their organization and list of officers follows:

COMPANY SECTION No. 1.

THE MILWAUKEE ELECTRIC RAILWAY &
LIGHT Co.—FORMED MARCH 18, 1912.
President.....VICTOR DENTZ.
Vice-President.....W. C. BOLT.
Secretary.....Ed. H. OLSEN.
Treasurer.....E. T. MASON.

DIRECTORS.

R. B. STEARNS, *ex-officio*.

One year......*Two years.*
W. W. HUNZICKER. E. W. MILLER.

Three years.
H. SCHEIFE.

COMPANY SECTION No. 2.

PUBLIC SERVICE COMPANY SECTION—
FORMED MAY 10, 1912.

President.....W. R. GRAHAM.
Vice-President.....R. H. HARRISON.
Secretary.....A. T. WARNER.
Treasurer.....T. J. MANNING.

DIRECTORS.

R. E. DANFORTH, *ex-officio*.

H. C. DONECKER, *ex-officio*.

One year......*Two years.*
A. P. McCULLOUGH, G. P. WALSH.

Three years.
H. H. GEORGE.

COMPANY SECTION No. 3.

THE DENVER TRAMWAY Co.—
FORMED SEPTEMBER 19, 1912.

President.....W. G. MATTHEWS.
Vice-President.....W. H. SEIP.
Secretary-Treasurer.....H. G. MUNDHENK.

DIRECTORS.

F. W. HILD, *ex-officio*.

One year......*Two years.*
W. E. CASEY, A. M. EVANS.

COMPANY SECTION No. 4.

WASHINGTON RAILWAY & ELECTRIC Co.—
FORMED FEBRUARY 25, 1914.

President.....CHARLES S. KIMBALL.
Vice-President.....J. T. MOFFETT.
Secretary-Treasurer.....R. A. VETTER.

DIRECTORS.

C. P. KING, *ex-officio*.

W. F. HAM, *ex-officio*.

One year......*Two years.*
WILLIAM L. CLARKE, L. B. SCHLOSS.

COMPANY SECTION No. 5.

(JOINT WITH N. E. L. A.)
THE MANILA ELECTRIC RAILROAD AND
LIGHT Co.—FORMED DECEMBER 15,
1914.

President.....WALTER A. SMITH.
Vice-President.....J. M. BURY.
Secretary.....ARTHUR J. GRANT.
Treasurer.....H. P. L. JOLLYE.

DIRECTORS.

J. B. RUSSELL, *ex-officio*.

One year......*Two years.*
B. SALANO, RAMON LOPEZ.

Three years.
WILLIAM A. SETEN.

COMPANY SECTION No. 6.

CHICAGO ELEVATED RAILROADS—FORMED
APRIL 17, 1915.

President.....H. A. JOHNSON.
Vice-President.....T. D. MILNE.
Secretary-Treasurer.....D. L. SMITH.

DIRECTORS.

G. T. SEELY, *ex-officio*.

One year......*Two years.*
H. P. SAVAGE, E. J. BLAIR.

COMPANY SECTION No. 7.

THE CONNECTICUT COMPANY—FORMED
DECEMBER 7, 1915.

President.....W. J. FLICKINGER.
Vice-President.....I. A. MAY.
Secretary.....W. E. JONES.
Treasurer.....G. H. CROSSON.

DIRECTORS.

W. P. BRISTOL, *Company Representative*.

One year......*Two years.*
P. W. RIPLE, C. H. JONES.

Three years.
C. R. HARTE.

COMPANY SECTION No. 8.

THE CAPITOL TRACTION Co. (WASHINGTON,
D. C.)—FORMED JANUARY 13, 1916.

President.....R. H. DALGLEISH.
Vice-President.....F. MORRILL.
Secretary.....J. FLEMING.
Treasurer.....A. WILKINSON.

DIRECTORS.

D. S. CARLL, *ex-officio*.

One year......*Two years.*
E. VON CULIN, C. J. HOSHALL.

Three years.
E. L. GRAYSON.

Medal for Best Company Section Paper

In connection with the work of Company Sections, the Association offers each year a handsome medal for the best paper read before a Company Section. The rules governing the award are:

The medal shall be of a design approved by the Executive Committee.
All contestants must be members of the section, before which the paper is read.

The paper must be read sometime between June 1st and May 31st of the year for which the award is made.

All papers must deal with some phase of the electric railway industry.

The criterion by which the papers are to be judged is their value to the electric railway industry.

All papers entered in competition must be placed in the hands of the secretary of the company section before which they were read and by him placed in the hands of the Committee on the Award of Company Section Medal before August 1st of the year in which the award is to be made.

All awards will be announced at the annual meeting of the American Electric Railway Association.

Winner of Company Section Medal

The winners since the inauguration of the competition have been:

1912-1913 — Mr. C. Nesbit Duffy, Vice-President of The Milwaukee Electric Railway and Light Co., for his paper on "Electric Railways — Financial Results — Benefits to Communities — Problems — Municipal Ownership Problems", read before The Milwaukee Electric Railway and Light Company Section, October 3, 1912.

1913-14 — Mr. H. G. Abendroth, of the Milwaukee Electric Railway and Light Co., for his paper on "Overhead Charges in Valuation," read before The Milwaukee Electric Railway and Light Company Section, June 11, 1914.

1914-15 — J. M. Bury, Manila Electric Railway & Light Co., Manila, Philippine Islands, for his paper on "Courtesy," read before The Manila Electric Railway & Light Company Section, April 6, 1915.

WORK WITH OTHER ORGANIZATIONS

The American Electric Railway Association acts extensively in conjunction and co-operation with other organizations whose objects are related to those of A. E. R. A.

It is a member of the **National Fire Protection Association**, which deals with matters relating to the reduction of fire losses and the improvement of building construction, etc.

Through a joint sub-committee it acts in conjunction with the **National Electric Light Association** on matters of Public Policy.

Through the National Joint Committee on Overhead and Underground Line Construction, it acts with the **National Electric Light Association**, **The American Railway Engineering Association**, **The American Institute of Electrical Engineers**, **The Association of Railway Telegraph Superintendents**, **The American Telephone & Telegraph Company**, **The Railway Signal Association**, **Independent Telephone Association of America**, **the United States Bureau of Standards**, **The American Railway Association**, **Western Union Telegraph Co.**, and **the Postal Telegraph-Cable Co.**

Through its Committee on Insurance and its Insurance Bureau, it is in touch with the **National Board of Fire Underwriters** on matters affecting insurance rates, schedules, etc.

Through its representation on the National Committee on Electrolysis it is acting with the **American Institute of Electrical Engineers**, **The American Railway Engineering Association**, **The American Telephone and Telegraph Co.**, **The National Electric Light Association**, **The American Gas Institute**, **The American Water Works**

Association, The National Gas Association and The Bureau of Standards, on matters connected with electrolysis.

Through its Committee on Heavy Electric Traction, the Engineering Association acts in conjunction with the **American Railway Association** and the **American Railway Engineering Association** in matters of mutual interest.

Through its Committee on a Standard Classification of Accounts, the Accountants Association, acts with the **Interstate Commerce Commission** in the consideration of matters affecting the Standard Classification of Accounts.

Through its Committee to Represent the Association at the Convention of the National Association of Railway Commissioner's the Accountants' Association, keeps in touch with the **National Association of Railway Commissioners**.

The Block Signals Committee of the Engineering and Transportation Association works with the **Railway Signal Association**.

Rules for City and Interurban Operation

The adoption of standard codes of rules for both city and interurban train operation, and their revision from time to time, has been one of the important functions of the Transportation and Traffic Association.

The first codes were adopted in 1909 and established the standard for operation of both city and interurban electric railways.

Amendments to the code have been made as follows:

To the City Code at the 1910, 1911, 1912, 1913 and 1914 Conventions.

To the Interurban Code at the 1911, 1912, 1914 and 1915 Conventions.

At the 1914 Convention, arrangements were made for an **authoritative interpretation of the rules** at the request of Member Companies. The following resolution governing such interpretation was passed by the Executive Committee of the Transportation and Traffic Association.

RESOLVED: That whenever an interpretation of any rule or rules is asked for by a Member Company, such request shall be submitted to the Committee on Rules for its opinion. Interpretation of rules made by the Committee on Rules shall be presented to the Executive Committee for approval and the action of the Executive Committee shall be entered in the minutes and referred to the Association for final action. When Member Companies request interpretation of rules, a copy of the opinion expressed by the Committee on Rules may be furnished in advance of any action by this Association as representing the judgment of the majority of its members, but the opinion of the Committee so furnished shall not be considered in any manner as representing the opinion of this Association.

For prices of Rule Books, etc., see page 62.

THE WORK OF COMMITTEES

The work of the parent association and its affiliated associations, is largely done through committees. As the constitution of each of these bodies leaves their management to their Executive Committee, it is the practice to have the working committees appointed by the presidents with the approval of the Executive Committees.

Standing Committees are usually appointed immediately after the annual conventions and their work is assigned to them either after a committee on subjects has reported to the Executive Committee, or after the Executive Committee itself has selected such subjects.

The American, Engineering, Claims and Transportation Associations have subjects committees.

Reports are made to the annual conventions of the various associations, although reports by approval of the Executive Committee are received at the mid-year meeting of the American Association. Reports are submitted to the various executive committees for their approval before presentation to the conventions.

In the case of the Engineering and Transportation and Traffic Associations all reports of committees making recommendations as to Standards and Recommendations are submitted to Committees on Standards, whose recommendations on the report are submitted at the same time as is the report itself.

The committees for the various associations for the year 1915-16 and the subjects which they are considering are:

AMERICAN ASSOCIATION

AERA Advisory Committee — To supervise the editing and publication of AERA.

A. N. Brady Medal — To formulate rules and conditions, under which shall be held the contest for the medals offered by the family of the late Anthony N. Brady to the electric railway that shall do the most each year to conserve the life and health of its passengers and employees.

Company Sections and Individual Membership — To induce the formation of company sections on the properties of member companies or groups of member companies and to recruit the individual membership of the Association.

Company Membership—To recruit the company membership of the Association from among the electric railway companies in the territory covered by the Association.

Compensation for Carrying United States Mail—To secure proper compensation by the United States of electric railways carrying mail.

Changes in Constitution and By-Laws—To consider and draft proposed changes in the Constitution and By-Laws of the Association.

Education—To supervise the correspondence educational courses arranged for the employes of the mechanical departments of Member Companies and to bring in closer touch with the Association the educational institutions of the country.

Electrolysis—To consider matters in connection with the subject of electrolysis.

Federal Relations—To keep in touch with, digest, and keep member companies informed as to National legislation, affecting electric railways. To oversee the work of the Washington representative of the Association.

Good Roads Congress—To represent the Association at the annual Congress of the National Good Roads Association and to report on transactions at such Congress of interest to Association members.

Insurance—Supervision of the work of the Association's insurance expert. Relations between insurance companies and member companies. All other matters relating to the insurance of electric railway property.

Medal for Best Company Section Paper—To select the best paper read before a company section during the current year, to the author of which a medal is awarded by the Association.

Public Relations—To devise and put in execution plans for bringing about, through proper publicity or otherwise, satisfactory relations between electric railways on one hand and company employes and the public on the other hand.

Standards for Car Loading—To continue the study of the subject of standards for car loading begun by a committee of the Transportation and Traffic Association.

Subjects—Subject to the approval of the Executive Committee, to assign subjects to the various committees, and to select subjects and speakers for the Annual Convention and Mid-Year Meeting.

Taxation Matters—To collect information concerning laws governing the taxation of electric railway property in the various states of the Union and Canada and to make such recommendations regarding methods and practices as shall be useful to member companies.

Valuation—To study and report on the subject of valuation as it affects electric railway properties.

ACCOUNTANTS' ASSOCIATION

Accounting Definitions—To prepare a glossary of terms used in electric railway accounting, in order to establish uniformity.

Standard Classification of Accounts—To consider all matters relating to the Standard Classification of Accounts and to secure its adoption by electric railway companies and to act in conjunction with the Interstate Commerce Commission on all questions arising under such classification.

Passenger, Express and Freight Accounting—To consider forms and methods of accounting for passenger, express and freight revenues and expenses.

To Represent Association at the Convention of Railway Commissioners—To attend the convention of the National Association of Railway Commissioners and to represent the Association thereat.

ENGINEERING ASSOCIATION

Buildings and Structures —

Subject No. 1.—Review of Association's existing Standards and Recommendations.

Subject No. 2.—Design of Shelters (considering 1912 Report), Bridges, Culverts, Fences, etc., looking to their adoption.

Subject No. 3.—General Specification and Form of Contract for Railway Structures.

Subject No. 4.—Proper Provision for Expansion and Contraction in Restrained Concrete Structures, consideration to be given to both plain and reinforced concrete, with provision made to properly water-proof and protect such arrangement.

Subject No. 5.—Oil Houses and their Equipment.

Subject No. 6.—Consideration of Tentative Safety Code of the United States Bureau of Standards insofar as it applies to the work of this Committee.

Electrolysis—Co-operate with the Association's representatives on the National Joint Committee on Electrolysis, continuing a study of the general subject.

Equipment —

Subject No. 1.—Review of Association's existing Standards and Recommendations, with special reference to the following—

- (a) Revision of Steel Wheel Design covering both $2\frac{1}{2}$ ", 3" and $3\frac{1}{2}$ " Thread, and Wheel from 21" to 37" in diameter.
- (b) Revision of Contour of Tread and Flange of Wheel.
- (c) Revision of Standard Design of Brakeshoes, Brakeshoe Head and Keys.
- (d) Revision of Standard Design of Axles, with a view toward including smaller sizes to take care of recent development in motor design for low floor cars.

Subject No. 2.—Standardization Rules of the A. I. E. E. (July 1, 1915, edition) insofar as they apply to the work of this Committee.

Subject No. 3.—Car Ventilation.

Subject No. 4.—Lighting of Electric Street Cars.

Subject No. 5.—Standard sizes of Carbon Brushes for Street Railway Motors.

Subject No. 6.—M. C. B. Brass for Heavy Electric Traction.

Subject No. 7.—Design of Limit of Wear Gauge for Association's Standard Flange Contours.

Subject No. 8.—Design of Trolley Catcher Socket which will permit of using any make of catcher without necessitating change of socket.

Subject No. 9.—Painting Cars, including consideration of the various so-called "quick drying" methods that have been suggested within the past few years, also the Enameling of Cars, with the idea of providing Specifications for the application of same.

Subject No. 10.—Consideration of Tentative Code of Safety Rules of the United States Bureau of Standards insofar as they apply to the work of this Committee.

Subject No. 11.—Investigation of Rail Corrugation in its relation to the use of Rolled or Forged Steel Wheels versus the use of Chilled Cast Iron Wheels.

Heavy Electric Traction —

Subject No. 1.—Review of Association's existing Standards and Recommendations with special reference to—

- (a) Change in Designing Line for Equipment in Standard Clearance Diagram for Third-Rail Working Conductors. (Co-operating with American Railway Engineering Association and American Railway Association.)

Subject No. 2.—Consideration of Standardization Rules of A. I. E. E. (July 1, 1915 edition) insofar as they apply to the work of this Committee.

Subject No. 3.—Study of Modern Electric Locomotives including Safety Devices. (To cover electric locomotives that are used in inter-urban service.)

Subject No. 4.—Co-operation with Committee on Block Signals and Power Distribution in preparing Clearance Diagram for Block Signals.

Subject No. 5.—Consideration of Tentative Safety Code of United States Bureau of Standards insofar as it applies to the work of this Committee.

Power Distribution —

Subject No. 1.—Review of existing Standards and Recommendations.

- (a) Revisions of Specifications for Overhead Crossings of Electric Light and Power Lines, if completed by the National Joint Committee on Overhead and Underground Line Construction.

- (b) Revision of Standard Stranding Table.

- (c) Revision of Standard Specification for Rubber Insulated Wire and Cable for Power Distribution Purposes as suggested by W. A. Delmar of Association of Railway Electrical Engineers.

Subject No. 2.—Consideration of Standardization Rules of A. I. E. E. (July 1, 1915 edition) insofar as they apply to the work of this Committee.

Subject No. 3.—Clearance Diagram for Semaphore Signals. (To be considered jointly with Committee on Heavy Electric Traction and Committee on Block Signals.)

Subject No. 4.—Further consideration of the subject of Concrete Poles including Deflection Formulae and Tables for Tapered Sections.

Subject No. 5.—Further Specifications for Overhead Line Material, including especially a Standard Thread for Pins and Insulators. (This subject to be taken up in connection with other Associations) and Specification for Structural Steel Cross Arms and Fittings.

Subject No. 6.—Consideration of various types of Third Rail Construction with description, and with a view to preparation of specifications.

Subject No. 7.—Collection of data preparatory to possible Standard Specifications for High Voltage D. C. and Catenary Trolley Construction.

Subject No. 8.—Consideration of Tentative Safety Code of United States Bureau of Standards as it affects Line Construction.

Power Generation —

Subject No. 1.—Review of Association's existing Standards and Recommendations.

Subject No. 2.—Consideration of Standardization Rules of the A. I. E. E. (July 1, 1915 edition) insofar as they apply to the work of this Committee.

Subject No. 3.—Advantages and disadvantages of 60-Cycle Apparatus, with particular reference to Rotary Converters for Railway Service.

Subject No. 4.—Collect, and if practicable, publish data and information that may be available in regard to operating performances of railway power systems.

Subject No. 5.—Report on good practice in regard to Smoke Abatement from the standpoint of Smoke Observations and Appliances and Devices used for determining Smoke Density.

Subject No. 6.—Consideration of the Boiler Code of the A. S. M. E. looking to its adoption by this Association.

Subject No. 7.—Specifications for the Purchase of Fuel.

Subject No. 8.—Consideration of Tentative Safety Code of the United States Bureau of Standards insofar as it affects the work of this Committee.

Standards —

Subject No. 1.—To approve new sections for insertion in Engineering Manual.

Subject No. 2.—To consider further the Standard Form for Drafting Specifications.

Way Matters —

Subject No. 1.—Review of Association's existing Standards and Recommendations.

(a) Specifications for Special Work. (These Specifications to be revised and corrected grammatically and re-drafted to conform to the proposed Standard of the Committee on Standards.)

(b) Revision of Recommended Design of 7" and 9" Joint Plates with special reference to sizes of bolt holes and fits. (Recommended that title of this subject be changed to read "Designs for Drilling of Rails and Joint Plates and their Application.")

(c) Recommended Symbols for Recording Surveys. (Committee of 1915 on Way Matters recommends title be changed to "Conventional Signs for Recording Surveys." To confer with such other committees as in the opinion of the Committee would be affected by the symbols suggested.)

(d) Recommended Designs for Layouts for Switches, Mates and Frogs.

Subject No. 2.—Ballast for Suburban and Interurban Lines.

Subject No. 3.—The use of Rolled Manganese and other Alloyed Steel Rails.

Subject No. 4.—Investigation of the Use of High Elastic Steel Machine Bolts 1½" diameter, ream or driving fit in connection with mechanical joints of Standard Design in Curves.

Subject No. 5.—Pavement for use in connection with Girder Grooved and Plain Girder Rails to cover:

(a) The formulation of a Specification covering the manufacture and installation of the various types of paving which might be used in connection with the car tracks.

(b) The matter of proper foundation should also be incorporated in such specification as well as the type of filler and cushions.

Subject No. 6.—Consider for Approval Specification for Preservation and Treatment of Woods for inclusion in the Engineering Manual.

Subject No. 7.—Preparation of Specifications with Definitions for

Sundry Track Materials such as Ties, Track Spikes, Bolts, Tie Rods, Tie Plates, etc., such investigation to be through co-operation with the A. S. T. M. in accordance with the procedure prescribed in the instructions to the Committee.

Subject No. 8.—Report upon the most efficient types of Hand Track Tools.

CLAIMS ASSOCIATION

Employment—To receive applications for employment in the claims department of electric railways, investigate applicants and keep a file of such applications for the use of member companies.

Subjects—To select and assign subjects for consideration by the various committees of the Association and to prepare the program for the annual convention, subject to the approval of the Executive Committee.

Ways and Means—To consider and report upon legislation affecting the claim departments of electric railway companies.

TRANSPORTATION AND TRAFFIC ASSOCIATION

Construction of Schedules and Timetables—

Subject No. 1.—Co-ordinate work of past committees.

Subject No. 2.—The Skip-stop Development and what it means, particularly from the community standpoint. Study influence of frequency of stops on schedule speed and the influence of schedule speed on operating costs.

Subject No. 3.—Revise the Standard Interurban Timetable as adopted in 1911.

Subject No. 4.—Study of Traffic Regulations.

Subject No. 5.—Exhaustive study of running time as affecting scheduled methods of determining same, together with variable effect of traffic on same, as well as effect on other elements, such as power, etc.

Express and Freight Traffic—

Subject No. 1.—Co-ordinate past work of previous committees.

Subject No. 2.—To make further effort to ascertain which style of contract is the most favorable from a revenue standpoint with old line express companies, "a tonnage basis," "a mileage basis," or "a pro-rate of the rates."

Subject No. 3.—To make an effort to secure a form of contract which the Committee may recommend for the use of traction lines in contracting with old line express companies.

Subject No. 4.—Further information tending to show the growth of interchange business with steam railroads.

Subject No. 5.—Study motor truck operating costs, etc.

Fares and Transfers—

Subject No. 1.—Co-ordinate work of previous committees.

Subject No. 2.—Recommendation for a method of interchange of passengers by means of paper transfers, or otherwise, with the idea of preventing abuse:

First, on the part of passengers.

Second, exchange of transfers by conductors.

Recommendation for an efficient method of checking transfers with a view to discovering irregularities in either of the above ways.

Subject No. 3.—Collection of fares in congested areas and terminals, including fare collectors, etc.

Passenger Traffic —

Subject No. 1.— Co-ordinate work of previous committees.

Subject No. 2.— Interline passenger traffic arrangements between Interurban and steam roads, with particular reference to collecting data from Member Companies who have such traffic agreements with steam lines.

Subject No. 3.— Ascertain basis of participation of Interurban lines in through rate, where the interurban line is the original carrier, and where tickets read to points beyond the next connecting line.

Subject No. 4.— Financial aspects of the operation of open cars.

Subject No. 5.— Special car methods and results.

Rules —

Subject No. 1.— Co-operate on block signal rules.

Subject No. 2.— Rules for two or more car unit operation.

Standards —

Subject No. 1.— Preparation and Publication of a Transportation and Traffic Manual.

Training of Transportation Employees —

Subject No. 1.— Co-ordinate work of previous Committees.

Subject No. 2.— Eyesight and Hearing Standards. Watch Inspection Methods. (These to be given additional study with recommendation as to definite Standards.)

JOINT COMMITTEES

Block Signals for Electric Railways (Engineering and Transportation and Traffic Associations) —

Subject No. 1.— Review of Association's existing Standards and Recommendations.

Subject No. 2.— Consideration of Standardization Rules of A. I. E. E. (July 1, 1915 edition) insofar as they apply to the work of this Committee.

Subject No. 3.— Digest of Block Signal Laws and Rulings. (This to cover the period from June 1, 1914, to June 1, 1916.)

Subject No. 4.— Bibliography of Block Signal Installation from June 1, 1915, to June 1, 1916, following the same plan as started by the 1915 Committee.

Subject No. 5.— Designs of additional Block Signal Apparatus looking to its adoption.

Subject No. 6.— Clearance Diagram for Semaphore Signals. (As the Committee did not consider this subject jointly with the Committees on Heavy Electric Traction and Power Distribution, the 1915 Committee on Standards referred it back for further consideration so there would be no conflict with existing Recommendations.)

Subject No. 7.— Block Signal Rules. Continuation of the subject as considered by the 1915 Committee.

Subject No. 8.— Study of Block Signal Operation, covering maintenance cost, efficiency of operation and effect on traffic. (This subject includes Definition of Signal Failure.)

Subject No. 9.— Highway Crossing Protection, including Aspect for Highway Crossing Signals that can be adopted by the Association.

Subject No. 10.— Light Signals for Interurban Railways. (Should be given further consideration with a view to the adoption of definite sizes of lenses.)

Subject No. 11.— Consider Tests for Contactor Type of Recording Signals.

Subject No. 12.— Consideration of Tentative Code of Safety Rules as prepared by the United States Bureau of Standards insofar as it applies to the work of this Committee.

Subject No. 13.— Co-ordinate past work of the Committees on Block Signals.

Subject No. 14.— Bring up-to-date Recommendations for the Committee on Standards.

Subject No. 15.— Study methods of Highway Crossing Protection.

Subject No. 16.— Study methods of Drawbridge Protection.

Subject No. 17.— Develop Form of Contract for Signal Installation.

Subject No. 18.— Study of Operating without Dispatchers.

Claims Transportation (Claims and Transportation and Traffic Associations) —

Subject No. 1.— Co-ordinate past work of the Committees on Claims Transportation.

Subject No. 2.— Investigate the applicability of moving pictures to Safety First work in its three phases, namely, training of employees, education of school children, and education of the general public.

Subject No. 3.— Co-ordinate Safety First Movement.

Subject No. 4.— Safety Advertising on Cars.

Engineering Accounting (Accountants and Engineering Associations) —

Subject No. 1.— Inter-departmental Charges.

Subject No. 2.— Consideration of the Sub-division of Accounts Covering Steam Power Station Costs as submitted by the 1915 Committee on Power Generation.

Subject No. 3.— Development of a Property Ledger looking toward the maintenance of a continuous inventory. (This to be considered as applying to the entire physical property.)

Life of Railway Physical Property (Accountants and Engineering Associations) —

Co-operate with Committee on Valuation and continue the work of compiling an up-to-date Bibliography on Valuation.

Transportation Accounting (Accountants and Transportation and Traffic Associations) —

Subject No. 1.—(a) Investigation of cost of handling baggage free to determine whether it brings business to the line, and, if so, whether the cost of handling this baggage wipes out the profit resulting from the fare received.

(b) Investigation of sub-division of power cost between construction, maintenance and operation.

Subject No. 2.— Graphic presentation of transportation data and statistics.

Transportation Engineering (Engineering and Transportation and Traffic Associations) —

Subject No. 1.— Train Operation in City Service. (It is understood there have been recent developments which would warrant further consideration at this time.)

Subject No. 2.— Economics of One-Man Car Operation. (To carry on work started by Committee on Passenger Traffic of T. & T. Association.)

Subject No. 3.— Two or More Car Operation, Interurban Service:

(a) Passenger Service.

(b) Freight Service.

(Investigation to cover cost of operation and comparative figures for single car operation.)

Subject No. 4.— Effect of Car and Equipment Design to be studied from a traffic standpoint in all its phases, first standardizing the method of determining results, i. e., having identical formulae and practice for obtaining observation and data from which conclusions are drawn.

Investigation to include specimen data sheet showing information which should be obtained in order that Member Companies who desire to follow the recommendations may have full information before them.)

Subject No. 5.—Investigation of Braking Distance on Interurban Cars with Special Reference to Location of Block Signals.

Subject No. 6.—Study of Electric Current Saving Devices including summary showing results obtained, together with costs including maintenance, etc.

Subject No. 7.—Train Operation in City Service—Trailer versus motor cars.

Subject No. 8.—One Man Car Operation—Comprehensive Study—Regulations in different localities—Increase in, etc.

Subject No. 9.—Consider rules and regulations for Interchange of Equipment between interurban lines and between interurban and steam lines. Submit report for further consideration from accounting, operating and mechanical standpoints.

CODES FOR COMMITTEES' USE

The Engineering and Transportation and Traffic Associations have adopted codes of instructions governing the work of their committees. Codes are:

Engineering Association

1. **Function of Standing and Special Committees.**—The function of committees is the investigation of engineering matters either referred to them by the Executive Committee or selected by them with the approval of the Executive Committee with a view towards either the approval of existing practices or recommendations for a change therefrom.

2. **Review of Existing Standards and Recommendations.**—Each Committee shall review all Standards and Recommendations appearing in the Engineering Manual as originated by such Committee and report upon any revisions which may, in the judgment of the Committee, be necessary.

3. **Character of Reports.**—In the work of the Engineering Association it should be borne in mind that the Committees are appointed as representatives of the Member Companies and that therefore all matters should be treated not alone from a purely Engineering standpoint, but also with due reference to the interests of the Companies from the standpoint of policy.

The subjects assigned by the Executive Committee are given only as a guide, it not necessarily being expected that all will be reported on during the current year, or that those reported on will be brought to a full completion. Those points should be determined by the Committee after a thorough estimate of the importance of each subject, the length of the report, and the time available at the convention for its consideration.

4. **Time for Filing Reports.**—All reports must be in the hands of the Secretary not later than July 1st in order that recommendations for adoption may be passed upon by the Committee on Standards in advance of the Convention.

5. **Information for Reports.**—Data or information may be obtained in any proper way, and upon request by the Chairman, the

Secretary will send out circular letters to the membership. The questions in these circulars should be specific, pertinent to the subject being discussed and of such character as to simplify the work of replying to them. Care must always be taken to verify as far as possible the accuracy of all data, however obtained, and to be sure that no material is published without the full consent of all parties concerned. If any data relative to the operations of any electric railway company is obtained from other sources, that company's consent to its publication must be obtained before report is made. The compilation of data and their subsequent analysis in the form of criticisms and arguments form a valuable preliminary part of the Committee work. All reasonable criticisms that have or may be offered to recommendations made by the Committee should also be considered.

6. Form of Report.—The body of the report should contain only that portion of the text which is absolutely essential to a clear interpretation of the conclusions reached and recommendations made.

Each report should be divided under the following headings:

- (a) Instructions from Executive Committee.
- (b) Introductory.
- (c) Meetings of the committee and subcommittees. (This should include the place and date of each meeting and a roll-call of those present.)
- (d) History.

A brief history of the subject matter of the report to be given. Reference to be made (giving page number in final bound proceedings) to recommendations made on the same subject by the Committee for the previous year and to the action taken thereon by the Association. If no final action was taken, the Committee should in its report again submit the subject to the Association in the same or revised form, and state clearly what action the Committee recommends. Text of the previous report in its original or revised form should be repeated.

- (e) Analysis of the most important elements of the subject.
- (f) Argument, giving the disadvantages of the present practice and the advantages of that proposed.

(g) Conclusions, giving in concise form the conclusions reached. It is very important that all conclusions and recommendations for Association "Standards" or "Recommendations" should be expressed in clear, comprehensive and concise language and be grouped in regular order, and that all plans, specifications, definitions, tables and formulae, embodied in the recommendation should be clearly indicated. Care should especially be exercised in regard to the use of the words "Standard" and "Recommendation." One of the chief objects desired to be attained by the work of the standing committees, is, if possible, the recommendation to the convention of certain matters for adoption either as "Recommendations" or as "Standards." The Association's rules for the adoption of Standards and Recommendations, particularly the definitions therein, should be carefully considered in deciding which grade to propose and the desired grade definitely stated for each matter under consideration.

- (h) Suggestions for Report for Ensuing Year. These should refer either to continuance of subjects under investigation or to new subjects which have come to the attention of the committee.

(i) Appendix. Data forming basis of committee's conclusions. As far as possible the reasons underlying the conclusions should be given, for the guidance of future committees. The appendix may contain in the form of papers presented by individuals, matter containing

valuable information pertaining to the subjects in hand, but it should be remembered that with the large increase in the work of the Association the volume of the proceedings is rapidly increasing and great care should be exercised to exclude irrelevant text or cuts.

7. Accuracy of Report.—Great care should be taken to insure the accuracy of the information contained in the reports, this being a matter in regard to which each member should feel a personal responsibility.

8. Responsibility for Report.—The original report when presented to the Secretary must bear the signature of all the members of the committee or must be accompanied by a minority report from those members disagreeing with the action of the committee as a whole.

Before printing the report in the bound proceedings the Secretary will submit a copy of the report to the Chairman who will make such revisions as he finds necessary and return the copy signed by him to the Secretary.

9. Preparation of Copy.—(a) A good half tone cannot be made from a poor photograph without a lot of expensive retouching. Do not expect as much detail in a half tone engraving as can be made out even in a poor photograph.

(b) Photographs 5 in. by 7 in. or 8 in. by 10 in. are the most satisfactory size. It is always desirable to have some reduction in size when making a half tone as this increases the sharpness. A small Kodak picture usually does not make a good engraving unless it is very sharp. Do not send photographic illustrations cut from magazines or other publications. They cannot be reproduced satisfactorily.

(c) Either Velox or Solio prints are satisfactory but too high a gloss is not desirable.

(d) Do not mark on the front of a photograph. Mark titles on the back, preferably on a piece of paper tipped on at one end so that it can be removed if necessary to mount the photo for retouching.

(e) If any painting out or other retouching is necessary, paste a piece of thin paper on the back, fold over on the face and make any marks with a soft pencil on this piece of paper indicating where the retouching is to be done.

(f) Take great pains to see that photos are not creased or bent in mailing. Mail them rolled in a heavy mailing tube or flat and protected by a heavy card board.

(g) Line drawings should be made on tracing cloth with black ink only. Colored inks either reproduce black or not at all.

(h) The size of the printed page is $3\frac{1}{8}$ in. by $6\frac{1}{2}$ in. and large insert pages should be avoided where possible. To this end it is desirable that all drawings should be made to such a scale that when reduced in size from two to six times they will come within the printed page. All drawings should be reduced in size at least two times in order to get clean cuts.

(i) It should be borne in mind that the greater the reduction of a drawing in making an engraving from it the less detail can be brought out clearly as lines close together will run together and fine lines will be lost entirely. A drawing intended for large reduction should have bold lines; dotted lines should have liberal space between dashes.

(j) For the sake of uniformity all drawings should be made with black ink and the necessary lettering put on with pencil so that the Secretary can have all lettering on all drawings inked in by one man who thoroughly understands lettering drawings for engraving. Every dimension which would be required on a working drawing must be

shown on those drawings which will be used in the Engineering Manual. Use only the essential dimensions on other drawings.

(k) Curves and diagrams drawn on section paper should be traced on cloth and only the large unit square drawn in. The fine lines on section paper will not reproduce in an engraving.

(l) Do not send in rough pencil sketches or blue prints unless absolutely necessary. It costs 20 to 25 cents per square inch to make wax engravings from this kind of copy as against five cents per square inch for engravings made from tracings.

10. Reports of Progress.—Chairmen are to report progress to the Secretary when requested.

11. Meetings.—(a) Notification: Chairmen will notify the Secretary of date and place at which meetings are to be held. The Secretary will then notify representatives of the technical press so that they may be present.

(b) Reports: Chairmen will report to the Secretary as promptly as possible the matters discussed and work accomplished at the various meetings.

(c) Expenses: Traveling, hotel and other necessary expenses of the committee members will be paid by the American Association upon presentation of vouchers duly approved by the Secretary and President of the Engineering Association. Vouchers covering expense accounts, when made, should as soon as possible after each meeting be sent to the Committee Chairman, in order that he may be kept advised of the amount being spent by his Committee, and forwarded by him to the Secretary.

In order to keep the cost of the work of the Engineering Association within its appropriation for the year, the meetings should be limited to as small a number as is consistent with the proper handling of the work. For the same reason the place of meeting should be selected with reference to the geographical location of the members. Also, as much as possible of the preliminary work should be accomplished through correspondence and of thorough outline of work to be undertaken at formal meetings be prepared and understood by all committee members in advance. The first meeting may often advantageously be held at the headquarters of the Association in New York City during the Mid-Year conference of the Association.

12. Vice-Chairman.—In order to insure the continuity of Committee work in case of disability of the Chairman, the latter will appoint a Vice-Chairman.

13. Rules for the Adoption of Standards.—The attention of the Committee is called to the following definitions adopted at the 1913 Convention covering "Standards" and "Recommendations":

Standard: Standard articles, designs, specifications, units, terminology, measurements or methods adopted shall be those which are applicable to general use and represent the best practice.

Recommendation: Recommended articles, designs, specifications, units, terminology, measurements or methods adopted shall be those which represent good present practice or progress of the art but which because of the formative state of the art and the likelihood of changes or which while of value do not admit of adoption as Standard at the time of consideration.

Attention is also called to the rules adopted by the Association at its Convention in 1913, one section of which reads as follows:

"As soon as possible after July 15th, the Secretary of the Association shall prepare a report for submission to the Committee on

Standards of all matters relating to proposed Standards or Recommendations which have been submitted by the various committees. In all cases the reports of the committees relating to proposed Standards or Recommendations shall contain definite recommendations with reasons in one of the following forms:

"(a) That further investigation is not warranted.

"(b) That the Committee be given more time to investigate.

"(c) That the proposed article, design, specification, unit, term, measurement or method which shall have been put in final and proper form by the committee reporting, be adopted as a Standard article, design, specification, etc.

"(d) That the proposed article, design, specification, unit, term, measurement or method be adopted as a Recommended article, design, specification, etc."

14. Discussion of Reports.—An earnest endeavor should be made to secure written discussions of the reports for consideration at the Convention. Upon request of the Chairman the Secretary will confirm the invitations in the name of the Association. Effort should also be made to have oral discussions by persons other than members of the committees, as remarks of the Committee should be confined to explanations requested by others on the floor.

15. Joint Action With Other Engineering Bodies.—Upon authorization from the Executive Committee, the Chairmen of the Standing Committees will appoint sub-committees to act in conjunction with other Engineering bodies; this Association to have equal representation with such other bodies on such sub-committees; the appointments to be confirmed in writing by the President. These sub-committees may include persons not members of the Standing Committees, provided, however, that one member is on the Standing Committee. In so far as possible, the personnel of these sub-committees is to be maintained until the subject in hand reaches a conclusion. The Secretary of the Engineering Association is to act as Secretary of these sub-committees.

Where matters are now under consideration between joint committees of this Association and other Associations the procedure will not be changed during the existing negotiations, but the Association's representatives must be kept informed of all action taken and consulted in reference thereto.

16. Correspondence.—Copies of all important letters should be sent at time of writing to the Secretary of the Engineering Association. After conclusion of the year's work the complete file of the Committee is to be forwarded to the Secretary of the Engineering Association.

17. AERA Question Box.—As part of the work assumed by members of Committees, it is expected that each member will throughout his tenure of office be a consistent contributor to the Question Box section of the Association's monthly magazine, AERA. While it is the primary purpose to secure from the members of our various committees replies to queries relating to the particular line of work assigned to the committee on which they are serving, it will materially add to the success of the Question Box if responses are made to other queries which may be of interest to our Committee members and also if such members will submit new queries from time to time.

18. Members are Appointed to Serve for One Year, or Until Their Successors are Appointed, the Executive Committee ruling, however, that a sufficient proportion of members shall be re-elected to insure continuity of work and unnecessary duplication.

Transportation and Traffic Association

1. Function of Standing and Special Committee.—The function of committees is the investigation of transportation and traffic matters referred to them with the approval of the Executive Committee with a view towards either the approval of existing practices or recommendations for a change therefrom.

2. Character of Reports.—In the work of the Transportation and Traffic Association it should be borne in mind that the Committees are appointed as representatives of the Member Companies and that therefore all matters should be treated not alone from a purely operating standpoint, but also with due reference to the interests of the Companies from the standpoint of policy. The subjects assigned by the Executive Committee are given only as a guide, it not necessarily being expected that all will be reported on during the current year, or that those reported on will be brought to a full completion. Those points should be determined by the Committee after a thorough estimate of the importance of each subject, the length of the report, and the time available at the convention for its consideration. If any committee feels that subjects other than those assigned should be investigated the Chairman shall make a recommendation to the Secretary of the Association who will submit it to the Executive Committee for approval.

3. Time for Filing Reports.—All reports must be in the hands of the Secretary not later than June 1st in order that recommendations for adoption may be passed upon by the Committee on Standards in advance of the Convention.

4. Information for Reports.—Data or information may be obtained in any proper way and upon request by the Chairman the Secretary will send out circular letters to the membership. The questions in these circulars should be specific, pertinent to the subject being discussed and of such character as to simplify the work of replying to them. The compilation of data and their subsequent analysis in the form of criticisms and arguments form a valuable preliminary part of the Committee work. All reasonable criticisms that have or may be offered to recommendations made by the Committee should also be considered.

5. Form of Report.—The body of the report should contain only that portion of the text which is absolutely essential to a clear interpretation of the conclusions reached and recommendations made.

Each report should be divided under the following headings:

(a) Instructions from Executive Committee.

(b) Introductory.

(c) Meetings of the committee and sub-committees. (This should include the place and date of each meeting and a roll-call of those present.)

(d) History.

A brief history of the subject matter of the report to be given. Reference to be made (giving page number in final bound proceedings) to recommendations made on the same subject by the Committee for previous years and to the action taken thereon by the Association. If no final action was taken, the Committee should in its report again submit the subject to the Association in the same or revised form, and state clearly what action the Committee recommends. Text of the previous report in its original or revised form should be repeated.

(e) Analysis of the most important elements of the subject.

(f) Argument, giving the disadvantages of the present practice and the advantages of that proposed.

(g) Conclusions, giving in concise form the conclusions reached. It is very important that all conclusions and recommendations should be expressed in clear, comprehensive and concise language and be grouped in regular order, and that all plans, definitions, tables and formulæ embodied in the recommendation should be clearly indicated.

(h) Suggestions for Report for ensuing year. These should refer either to continuance of subjects under investigation or to new subjects which have come to the attention of the Committee.

(i) Appendix. Data forming basis of Committees' conclusions. As far as possible the reasons underlying the conclusions should be given for the guidance of future Committees. The appendix may contain, in the form of papers presented by individuals, matter containing valuable information pertaining to the subjects in hand, but it should be remembered that with the large increase in the work of the Association the volume of the proceedings is rapidly increasing and great care should be exercised to exclude irrelevant text or cuts.

6. Accuracy of Report.—Great care should be taken to insure the accuracy of the information contained in the reports, this being a matter in regard to which each member should feel a personal responsibility.

7. Responsibility for Report.—The original report when presented to the Secretary must bear the signatures of all the members of the Committee or must be accompanied by a minority report from those members disagreeing with the action of the Committee as a whole.

Before printing the report in the bound proceedings the Secretary will submit a copy of the report to the Chairman who will make such revisions as he finds necessary and return the copy signed by him to the Secretary.

8. Preparation of Copy.—(a) A good half tone cannot be made from a poor photograph without a lot of expensive retouching. Do not expect as much detail in a half tone engraving as can be made out even in a poor photograph.

(b) Photographs 5 in. by 7 in. or 8 in. by 10 in. are the most satisfactory size. It is always desirable to have some reduction in size when making a half tone as this increases the sharpness. A small kodak picture usually does not make a good engraving unless it is very sharp. Do not send photographic illustrations cut from magazines or other publications. They cannot be reproduced satisfactorily.

(c) Either velox or solio prints are satisfactory but too high a gloss is not desirable.

(d) Do not mark on the front of the photograph. Mark titles on the back, preferably on a piece of paper tipped on at one end so that it can be removed if necessary to mount the photo for retouching.

(e) If any painting out or other retouching is necessary, paste a piece of thin paper on the back, fold over on the face and make any marks with a soft pencil on this piece of paper indicating where the retouching is to be done.

(f) Take great pains to see that photos are not creased or bent in mailing. Mail them rolled in a heavy mailing tube or flat and protected by a heavy card board.

(g) Line drawings should be made on tracing cloth with black ink only. Colored inks either reproduce black or not at all.

(h) The size of the printed page is $7\frac{1}{16}$ in. by $6\frac{1}{2}$ in. and large insert pages should be avoided where possible. To this end it is desirable that all drawings should be made to such a scale that when

reduced in size from two to six times they will come within the printed page. All drawings should be reduced in size at least two times in order to get clean cuts.

(i) It should be borne in mind that the greater the reduction of a drawing in making an engraving from it the less detail can be brought out clearly as lines close together will run together and fine lines will be lost entirely. A drawing intended for large reduction should have bold lines; dotted lines should have liberal space between dashes.

(j) For the sake of uniformity all drawings should be made with black ink and the necessary lettering put on with pencil so that the Secretary can have all lettering on all drawings inked in by one man who thoroughly understands lettering drawings for engraving. Use only the essential dimensions on drawings and do not attempt to show every dimension which would be required on a working drawing.

(k) Curves and diagrams drawn on section paper should be traced on cloth and only the large unit square drawn in. The fine lines on section paper will not reproduce in an engraving.

(l) Do not send in rough pencil sketches or blue prints unless absolutely necessary. It costs 20 to 25 cents per square inch to make wax engravings from this kind of copy as against five cents per square inch for engravings made from tracings.

9. Reports of Progress.—Chairmen are to report progress to the Secretary when requested.

10. Meetings.—(a) Notification: Chairmen will notify the Secretary of date and place at which meetings are to be held. The Secretary will then notify representatives of the technical press so that they may be present.

(b) Reports: Chairmen will report to the Secretary as promptly as possible the matters discussed and work accomplished at the various meetings.

(c) Expenses: Traveling, hotel and other necessary expenses of the committee members will be paid by the American Association upon presentation of vouchers duly approved by the Secretary and President of the Transportation and Traffic Association. Statements should be sent to the Secretary as soon as possible after expenses have been incurred.

In order to keep the cost of the work of the Transportation and Traffic Association within its appropriation for the year, the meetings should be limited to as small a number as consistent with the proper handling of the work. For the same reason the place of meeting should be selected with reference to the geographical location of the members.

Also, as much as possible of the preliminary work should be accomplished through correspondence and a thorough outline of work to be undertaken at formal meetings be prepared and understood by all committee members in advance.

11. Vice-Chairman.—In order to secure continuity of Committee work the Vice-Chairman of a Committee for the previous year will serve as Chairman for the current year.

12. Rules for the Adoption of Standards.—The attention of the Committee is called to the following definitions adopted at the 1915 Convention covering "Standards" and "Recommendations":

Standard: Standard Articles, Standard Forms, Standard Units, Standard Terminology or Standard Methods adopted shall be those which are applicable to general use and represent the best practice.

Recommendation: Recommended Articles, Recommended Forms, Recommended Units, Recommended Terminology or Recommended Methods adopted shall be those which represent good present practice or progress of the art, but do not admit of adoption as Standard at the time of consideration, because of the formative state of the art and the likelihood of changes.

13. Discussion of Reports.—An earnest endeavor should be made to secure written discussions of the reports for consideration at the Convention. Upon request of the chairmen the Secretary will confirm the invitations in the name of the Association. Efforts should also be made to have oral discussions by persons other than members of the committees, as remarks of the Committee should be confined to explanations requested by others on the floor, except that committeemen should be prepared to give the experience of their respective companies concerning the subjects and practices set forth in the report.

14. Joint Action With Other Bodies.—Upon authorization from the Executive Committee, the Chairman of the standing committees will appoint sub-committees to act in conjunction with other bodies, these appointments to be confirmed in writing by the President. These sub-committees may include persons not members of the standing committees, provided, however, that one member is on the standing committee. In so far as possible, the personnel of these sub-committees is to be maintained until the subject in hand reaches a conclusion. The Secretary of the Transportation and Traffic Association is to act as Secretary of these sub-committees.

15. Correspondence.—Copies of all important letters should be sent at time of writing to the Secretary of the Transportation and Traffic Association. After conclusion of the year's work the complete file of the Committee is to be forwarded to the Secretary of the Transportation and Traffic Association.

16. AERA Question Box.—As part of the work assumed by members of Committees, it is expected that each member will throughout his tenure of office be a consistent contributor to the Question Box section of the Association's monthly magazine, AERA. While it is the primary purpose to secure from the members of our various committees replies to queries relating to the particular line of work assigned to the Committees on which they are serving, it will materially add to the success of the Question Box if responses are made to other queries which may be of interest to our Committee members and also if such members will submit new queries from time to time. Any points of general interest brought up in the Question Box shall, with the approval of the Executive Committee, be considered by the appropriate Committee and either referred to in its report or made the basis of recommendations for work by the incoming Committee.

THE PERSONNEL OF 1915-1916 COMMITTEES

The membership of the committees of the American and its affiliated associations for the year 1915-16 will be found on page XI.

WORK OF HEADQUARTERS

Supplementing the work of the committees, is that performed by the various bureaus, either under the direction of committees, or under the personal supervision of the Secretary and by the office force at the Association's headquarters. Among the most important of these activities are:

THE INFORMATION BUREAU

It is the function of this bureau, which is under the direction of the Secretary, to collect and compile information on subjects, relating to management, operation and other subjects of interest to Member Companies.

Bulletins of Information which were generally distributed to Member Companies, have been issued as follows:

- No. 101 — "Wages of Conductors and Motormen" (1908), and supplement thereto.
- No. 102 — "Wages of Employes Other Than Trainmen" (1908).
- No. 103 — "Relation Between Operating Expenses and Gross Receipts on a Percentage Basis for Interurban Lines" (1908).
- No. 104 — "Interurban Fares" (1908).
- No. 105 — "City Fares" (1908).
- No. 106 — "Relation Between Operating Expenses and Gross Receipts on a Percentage Basis for City Lines" (1908).
- No. 107 — "Taxes and Other State and Municipal Requirements City Lines" (1909).
- No. 108 — "Passenger Receipts Per Capita City Line" (1909).
- No. 109 — "Wages of Conductors and Motormen" (1909).
- No. 110 — "Requirements of Electric Railways With Regard to the Use of Brakes on City Cars" (1909).
- No. 111 — "The Merit and Demerit System of Discipline" (1910).
- No. 112 — "Wages of Conductors and Motormen" (1911).
- No. 113 — "Mutual Benefit Associations and Other Forms of Welfare Work" (1911).
- No. 114 — "Wages of Employes Other Than Trainmen" (1911).
- No. 115 — "Chartered Cars" (Not printed) (1911).
- No. 116 — "Wages of Conductors and Motormen" (1912).
- No. 117 — "Wages of Conductors and Motormen" (1913).
- No. 118 — "Wages of Conductors and Motormen" (1915). (Ready April 15th, 1915.)

Investigations are made at the request of Member Companies for their information and guidance. Any Member Company has the privilege of requesting that such an investigation be made and the information is furnished as

promptly as the facilities of the Association will permit. As indicative of the scope and extent of such investigations, it may be recited that some 377 investigations, covering a wide range of subjects, were made at the request of 184 Companies, during the past year.

BUREAU OF FARE RESEARCH

As the result of the investigations of the Committee on Cost of Passenger Transportation Service, appointed in 1913, there was established on May 1, 1914, under the direction of this Committee, a Bureau of Fare Research, having for its purpose the investigation of factors affecting the cost of passenger transportation service.

The Bureau was temporarily discontinued on November 1, 1915, after the completion of the work outlined at the time of its organization. During the eighteen months of its existence, it did work of great value to the Association and to the industry. The compilation of statistical matter, both financial and operating, was begun and summaries of operating revenues and expenses indicating the trend from month to month were prepared and given publicity through AERA and the technical press.

Also, under the direction of the Director, there has been added to the files of the Association a very large amount of material relating to specific factors of the cost of passenger transportation service, the progress of court and commission cases having to do with rates of fare, the types of rates and operating practices in connection therewith and other material relating to the work undertaken by the Bureau. This material has been to a large extent classified so as to render it available for future investigations.

The Bureau, during its existence, prepared for the use of member companies a number of studies of various features of railway operation. Among these may be cited:

Children's fares

Auxiliary fare collection

Rates of fare per mile on interurban lines

Charges for transfers

Fares in cities classified by population
Summer and winter fares
Workmen's fares
Rate of return allowed by different regulatory bodies
Constitutionality of indemnity bond feature of jitney bus ordinances
Motor bus cost
Increase in rates of fare in New England
Platform labor as a function of total cost of operation

For the Committee on Compensation for Carrying United States Mail the Bureau collected and analyzed the data requested by the Joint Congressional Committee on Postage of Second Class Mail Matter and Compensation for the Transportation of Mail.

For the Committee on the Operation of Motor Vehicles the Bureau prepared a study on "The Cost of Service of the Jitney Bus," which was issued as a supplement to the committee report.

As a supplement to the report of the Committee on Cost of Passenger Transportation Service, the Bureau has prepared and the Association has published a study entitled "Studies in the Cost of Urban Transportation Service." This work contains twenty-nine chapters grouped under the following general heads, "The Occasion for Cost of Service," "Elements of Cost," "Elements of Service," "Special Problems," and "Regulation and the Cost of Service." It deals in a comprehensive manner with the various phases of the subject discussed.

It is the intention of the Association that the Bureau shall at some later time be re-established, with the idea of continuing the studies so begun.

BUREAU OF PUBLIC RELATIONS

At its convention in 1914, the American Electric Railway Association authorized its Committee on Public Relations to proceed with the establishment of a Bureau of Public Relations, under the supervision of a Director, whose appointment is in the hands of the Committee which has general charge of the Bureau's activities.

The work of the Bureau was outlined in the report of the Committee as follows:

I.

The dissemination of information and literature on subjects of general importance to Public Service Corporations, including particularly:

- (a) Relations with employees.
- (b) Public relations.
- (c) Regulatory laws and commissions.
- (d) Publicity concerning facilities, service and accounts.
- (e) Rate making.
- (f) Depreciation and reserve accounts.
- (g) Taxation.
- (h) Franchises.

The above contemplates close association between the Bureau and Member Companies of the Association as to the furnishing and distribution of reports, information and statistics, and it is suggested that each Member Company be requested to designate a representative through whom correspondence with the Bureau may be conducted.

II.

Co-operation with similar committees of other Public Service Associations.

III.

Influencing the sources of Public Education, particularly by:

- (a) Lectures on the Chautauqua circuits.
- (b) Formation of a committee of prominent technical educators to promote the formulation and teaching of correct principles and public service questions in technical and economic departments of American colleges through courses of lectures and otherwise.
- (c) Formation of a similar committee in each of the great technical societies, such as the electrical engineers, mechanical engineers, civil engineers, chemists, hydraulic engineers, telephone engineers.
- (d) Formation of a similar committee to work in connection with the various civic and economic societies.
- (e) Discussions at institutions of learning and Y. M. C. A.'s on subjects pertinent to the relations between the public and service corporations.

IV.

The publication in magazines and periodicals of signed popular articles on public service questions by prominent workers in the electric railway industry.

V.

Newspaper advertising when desirable and financially possible.

Harlow C. Clark is Director of the Bureau of Public Relations.

EDUCATIONAL COURSES

Educational courses for officers and employes of Electric Railway Companies are conducted under the auspices of a committee of the Association.

The courses for shopmen, and others connected with the Mechanical and Electrical Departments, is conducted by the International Correspondence Schools with the Committee on Education of the American Association acting in an advisory capacity. Thirty-eight member companies are represented in the first year's enrollment. The courses of the correspondence school were revised under the direction of the Committee and as a result the following courses at the prices quoted are offered to electric railway employees:

COURSE	1st Installment	COST IF PAID IN	
		Monthly Installments of \$10 each	Monthly Installments of \$5 each
A. Mechanical Shop Course.....	\$30	\$33	\$36
1. Forge and Blacksmith Work.			
2. Machine Work.			
Either part may be taken first.			
B. Electrical Shop Course.....	30	33	36
Courses A and B.....	47	52	57
C. Line and Track Work Course.....	30	33	36
1. Outside Line Work.			
2. Track Work.			
Either part may be taken first.			
D. Power House and Substation Course.	37	41	45
Courses C and D.....	45	50	54

The course of procedure is as follows:

Each student enrolls as an individual with the correspondence school and receives therefrom the necessary instruction pamphlets, serially. As each is completed the examination questions thereon are answered by the student and the answers criticised by the school. From time to time parts of the A. E. R. E. A. *Engineering Manual* are included with the instruction pamphlets and questions asked to insure a correct understanding of the purpose and scope of the Association standards.

Frequent reports of the progress of each student are furnished by the school to the Committee on Education, which keeps a general supervision over the course. The Committee also receives suggestions and complaints from the students and in every possible way endeavors to encourage them in their work. The Committee also endeavors to keep in touch with an official of each company especially interested in the educational efforts of its employees.

The single courses are laid out so that they can be completed by the average student in a year of steady work, but in many cases, it will require longer. There is no time limit set but students are urged to complete each course promptly. The combination courses take longer than the single courses but not as long as the component courses would require separately as some parts are common to the different courses.

IDENTIFICATION BUREAU

This Association is a member of the Hooper-Holmes Information Bureau and through this membership, the services of this concern are thrown open to every Member Company.

The Hooper-Holmes Information Bureau is a clearing house for the exchange, between transportation and accident insurance companies of information concerning claimants for personal injury damages.

Briefly the plan is: Transportation and accident insurance companies furnish to the bureau information concerning claimants. A record is made of such information and indexed alphabetically under the name of the claimant. Companies, using the service of the Bureau, report the names of claimants. If the Bureau's records show that such claimants have before made claims on either accident insurance or transportation companies, such information as is on hand is immediately sent to the reporting company.

In the files of the Bureau are nearly 4,000,000 names and these are growing at the rate of 460,000 a year. They include claimants from all over the United States. Much money has already been saved to Member Companies by the operation of the Bureau and it is of admitted value to the Association.

Rules Governing Use of this service are as follows:

To secure from the office of the Secretary of the American Electric Railway Association, a supply of the necessary blanks.

To report on the proper blank, as soon as claims have been filed the names of all claimants, about whom there is the least doubt and to forward such blanks promptly to the office of the Secretary of the American Electric Railway Association.

If the names of any of the claimants, shown on the blanks, are found in the files of the Hooper-Holmes Bureau the reporting company will be immediately furnished with all information available. If the name is not so filed, it will be recorded and no answer will be made.

In urgent cases, reports may be made by telegraph and information, if there be any, will be forwarded in the same way.

The cost to Member Companies for this service will be 5 cents for each name reported by them by mail and 15 cents for each name reported by telegraph.

Bills will be rendered each month through the Association for this service. Member Companies must conduct all business through the Association and not directly with the Hooper-Holmes Bureau.

INSURANCE BUREAU

The work of the Insurance Bureau is in charge of an insurance expert, under whom is a chief engineer. The Bureau is under the direction of the Committee on Insurance.

Members of the Insurance Bureau consist of those Member Companies, who contribute a pro-rata share to the support of the Bureau.

The Insurance Committee and since its organization in 1911, the Insurance Bureau has accomplished a great work for the companies. It began its labors, by collecting data which proved that basic rates and deficiency charges on electric railway properties were excessive; it worked out plans and specifications for the protection of electric railway properties and it formed, ready for operation, an insurance company among electric railway and light companies, for the purpose of carrying the insurance on their own properties.

The average rate in 1905 before the committee began its work was \$1.50 on each \$100 of insurance. It was dropped to 75 cents for each \$100, and the companies had materially improved conditions surrounding their property and installed fire fighting and fire prevention equipment.

The Committee on Insurance coöperated with the National Fire Protection Association in improving conditions surrounding electric railway property and the old line companies offered their co-operation and organized the Central Traction and Lighting Bureau, which had charge for the insurance companies of insurance on electric railway and lighting properties and through which negotiations could be conducted for better conditions and rates.

The Insurance Bureau, through its experts, conducts such negotiations; it examines, recommends and oversees changes and improvements in conditions surrounding the property of its members and suggests and oversees the installation of fire protective apparatus; it is in touch and acts for its members in arranging for rates and conditions with the old line insurance companies, factory mutual companies, state rating bureaus; represents the Association in the National Fire Protection Association and in fact assists in every way its members in all matters connected with insurance.

The Cost of Membership in the Insurance Bureau is:

Companies having gross receipts of \$500,000 or less — \$50 per year, in advance plus railway fare of expert and his assistants when engaged in the service of the company.

Companies having gross receipts of \$500,000 to \$700,000 — \$100 per year in advance, plus railway fare of expert and assistants when engaged in the service of the company.

Companies having gross receipts of more than \$700,000 — \$200 per year in advance, plus railway fare of expert and assistants when engaged in the service of the company.

The Insurance Expert is Henry N. Staats, The Chief Engineer is W. G. Asmus, address, Leader Building, Cleveland, Ohio.

WASHINGTON REPRESENTATIVE

The Association maintains at Washington a representative, who keeps in touch with all legislation introduced in Congress affecting electric railways or their interests. Such representative acts under the direction of the Committee on Federal Relations. He keeps the Association informed upon all matters of legislation, arranges for hearings, upon such bills as the Association, or Member Companies, desire to be heard, follows closely the decisions of the United States Supreme Court and the Interstate Commerce Commission and perform many other services.

Clark, Prentiss & Clark, Suite 611-616 Metropolitan Bank Building, Washington, D. C., are the present representatives.

THE ANTHONY N. BRADY MEMORIAL MEDALS

Early in 1914, the family of the late Anthony N. Brady authorized the award annually by The American Museum of Safety of a gold medal to that American electric railway company which for the year of the award shall have done the most to conserve the safety and health of the public and its employees. In addition to the gold medal awarded to the company, a replica in silver is awarded annually to that member of the operating staff who has most contributed to the successful record of such company; and another replica in bronze is awarded to that employe of the company whose services have been of the greatest value in the promotion of safety and health.

In February, 1914, The American Museum of Safety, desirous of securing the coöperation of the American Electric Railway Association, requested it to appoint a committee from its own membership to formulate the conditions of competition.

Acting on this request, the President of the Association appointed Arthur W. Brady, President, Union Traction Company of Indiana, Chairman; Frank Hedley, Vice-President and General Manager, Interborough Rapid Transit Company, and C. S. Sergeant, Vice-President, Boston Elevated Railway, members of this Committee.

After several conferences, the Committee drew up the conditions for the competition. It also recommended a Committee on Award, which was promptly appointed by the President of the American Electric Railway Association, as follows: Bion J. Arnold, Chairman, Will J. French, James H. McGraw, Frank J. Sprague, and George F. Swain.

The first-mentioned committee reported, through its chairman, Mr. Arthur W. Brady, to the American Electric Railway Association, at its Atlantic City convention in October, 1914.

Statistical blanks, for report of accidents according to the conditions of the competition, are sent to all of the electric railways in the United States each year. These reports are to

be in the hands of the Jury of Awards by September 1st of the same year. After tabulation by a statistical expert they are carefully studied by each member and the awards made.

The awards made by the Committee in 1914 were as follows:

Gold Medal — The Boston Elevated Railway Co., Boston, Mass.
Silver Replica — Russell Adam Sears, General Attorney, Boston
Elevated Railway Co., Boston, Mass.

Bronze Replica — Henry Vinton Neal, Shop Employee, Boston
Elevated Railway Co., Boston, Mass.

Honorable Mention — Public Service Railway Co., Newark, N. J.

Special Favorable Mention — Northern Ohio Traction & Light Co., Akron, Ohio.

1915 AWARDS

Conditions of the Competition

The competition shall be for the year ending June 30th, and every company entering the competition shall file with The American Museum of Safety by the first day of October next after the close of the year the data upon which it founds its claim to the award.

Every competing company shall include data covering all lines comprising the entire system of which it is a part, without regard to technical ownership. The test ordinarily would be operation under the jurisdiction of a single president.

Such data shall include:

1. A report of all casualties to passengers, employees and others in the form shown herewith.

The terms used in this form are to be understood as follows:

A "train mile" is a mile made by a train whether composed of one or more cars. A "car mile" is a mile made by a car whether operated singly or as a part of a train of two or more cars.

The number of employees for computing the rate per 1,000 in industrial accidents is determined by dividing the aggregate days worked by all employees in industrial service, such as track men, line men, shop men, power house and sub-station men, freight handlers, and others not actually engaged in the operation of cars, by the number of working days in the period covered by the report.

Train accidents include all casualties resulting from collisions with other cars or trains, derailments, and miscellaneous accidents to trains.

Other than train accidents include all casualties resulting from accidents to roadway or bridges not causing derailments, as, for instance, fires, floods, land-slides, explosions, etc.; also all resulting from collisions with vehicles, platform accidents, and other accidents connected with the actual operation of cars not including industrial accidents.

Industrial accidents include all accidents not involving train operation, but occurring to employes of the company on or about railway premises. Instances are: accidents occurring to employes while working on tracks, bridges or other structures, at stations, in or about power houses, sub-stations, shops, barns, transmission and distribution lines. Railway premises include highways and other public property occupied under franchise rights.

Passengers include passengers on passenger, freight and mixed trains or cars, and persons carried under agreement or contract, such as employes of express companies, postal employes, etc.

Employes include employes of the company competing, but not the employes of other companies carried under agreement or contract.

Other persons not trespassing include all persons other than passengers, employes and trespassers.

Killed: Accidents to persons resulting in immediate death or in death within 24 hours from the time the accident occurred should be reported in columns headed "Killed."

Injured: All other accidents to persons, including those resulting in death of the person injured after interval of more than 24 hours from the time the accident occurred, should be reported in the column headed "Injured." Trivial accidents need not be reported. Accidents to employes shall be regarded as trivial if they result in injuries so slight as not to prevent the employe injured from performing his accustomed service for more than three days, in the aggregate, during the ten days immediately following the accident. Injuries to passengers and other persons that do not prevent the injured person from following his customary vocation for more than one day shall be regarded as trivial.

2. A report of the various measures taken during the year covered by the report to conserve safety and health, including, among others, the following:

Measures to Prevent Accidents

- (a) Block signals.
- (b) Protective devices at railroad crossings.
- (c) Protective devices at highway crossings.
- (d) Protective devices at other points of danger.
- (e) Automatic stops.
- (f) Safety devices in cars, shops, power houses, sub-stations, and in connection with roadway and transmission and distribution systems.
- (g) The separation of grades, the reduction of curves, and the elimination of obstructions to view.
- (h) The observance of high standards with regard to the inspection, maintenance and improvement of rolling stock, roadway, transmission and distribution systems.
- (i) Standards of employment, physical and mental.
- (j) Periodical examination of employes, physical and mental.
- (k) Rules and discipline.
- (l) Educational measures affecting the public, including school children.
- (m) Educational, protective and co-operative measures by and through employes.

Measures to Alleviate Effects of Accidents

- (a) First aid to the injured, including instruction and training of employes, and first aid equipment.
- (b) Emergency and other hospitals.

Measures to Promote Health

- (a) Attention to lighting, ventilation, cleanliness, disinfection, pure water, sanitary conveniences, and other factors affecting the health of passengers.
- (b) Attention to lighting, ventilation, cleanliness, disinfection, pure water, sanitary conveniences, and other factors affecting the health and welfare of employes.
- (c) Instruction of employes in matters of hygiene and sanitation.

3. A report showing the following facts in connection with the operations of the company for the year:

- (a) The single track mileage of all lines operated during the year.
- (b) The division of the track mileage into surface, elevated and subway lines respectively; also into urban, suburban and interurban lines respectively; showing also what part of the mileage is on private right of way.

- (c) Total number of passengers carried.
- (d) The number of revenue passengers carried, showing separately the number carried on surface lines.
- (e) The number of car miles run, showing separately the car miles run on surface lines.
- (f) The gross earnings per mile of single track in each class of service.
- (g) The amounts of earnings, both the amount set aside and that actually paid, on account of accidents occurring during the year, together with the ratio of such amounts to gross earnings.
- (h) The monthly average number of employees.
- (i) Total number of passenger cars in use.
- (j) Total number of freight cars in use.
- (k) Total number of motor cars in use.
- (l) Density of population in the territory operated in.
- (m) The especial difficulties, if any, physical, legal and other, affecting the safety of operation.

4. A report of all other facts regarded by the company as materially bearing upon the record for conservation of safety and health made during the year. Data for other years may be given under this heading.

The Committee on Award may ask for any additional data.

ACCIDENT REPORT FORM

The American Museum of Safety

Competition for the

ANTHONY N. BRADY MEMORIAL MEDALS

Returns for the..... Company
for year ended June 30, 1915

ACCIDENTS IN TRAIN SERVICE

Total train miles run.....

Total car miles run.....

	Number		Number per Million Train Miles Run		Number per Million Car Miles Run	
	Killed	Injured	Killed	Injured	Killed	Injured
Casualties in Train Accidents:						
Passengers						
Employes						
Other persons						
Other persons, trespassing						
Total						
Casualties in Other Than Train Accidents (Excluding Industrial Accidents):						
Passengers						
Employes						
Other persons						
Other persons, trespassing						
Total						

INDUSTRIAL ACCIDENTS (Not involving movement of cars)

Total Number of "Industrial" Employees.....

	Number		Number per 1,000 Employees		
	Killed	Injured	Killed	Injured	
Casualties to Employees:					
Total					

Signed.....

(Please state official title)

NOTE—Each competing company may file details of the casualties reported, analyzing and classifying the causes and circumstances thereof and showing whether due to the fault of the person injured or killed or to causes beyond his control.

Value to Be Given Data

It is obvious that in determining the weight to be assigned to the casualties reported, consideration must be given to the relations between the company and the person injured, and to the cause of the casualty. The following rule has therefore been adopted for the guidance of the Committee on Award: The casualties per 1,000,000 car miles, and, in the case of industrial accidents, per 1,000 employes, shall be multiplied by the factors stated in the following table:

	Multiplier	
	Killed	Injured
Casualties in Train Accidents:		
Passengers.....	200	4
Employes.....	80	2
Other persons (not trespassing).....	80	2
Casualties in Other than Train Accidents:		
Passengers.....	100	2
Employes.....	40	1
Other persons (not trespassing).....	40	1
Employes in Industrial Accidents.....	40	1

The company showing the smallest total of the added results thus obtained would have the best record for the year, provided equality existed in all other respects. It is clear, however, that no company would be on an exact equality with its competitors in all other respects, and that the total result obtained by the application of this weighted scale would be only one of the elements to be considered by the Committee on Award. The Committee would also consider all the other data reported, together with any supplemental data provided at the request of the Committee, and endeavor to give proper weight to every element shown.

The Committee on Award for 1915 was as follows: Mr. Bion J. Arnold, Chairman, Chairman Board of Supervising Engineers, Chicago; Hon. Will J. French, Commissioner, Industrial Accident Commission of the State of California; Mr. James H. McGraw, President, McGraw Publishing Company, Inc., New York; Mr. Frank J. Sprague, New York; Prof. George F. Swain, Chairman, Boston Transit Commission; Dr. W. H. Tolman, Secretary, Director, The American Museum Safety.

PUBLICATIONS

The regular publications of the Association are:

AERA, issued monthly.
 YEAR BOOK, issued yearly.
 PROCEEDINGS, issued yearly.
 ENGINEERING MANUAL, revised yearly.

Publications and Price thereof are indicated in the following lists of reports, addresses and other matters of interest issued from the Association headquarters:

"Standard Classification of Accounts and Form of Report for Electric Railways," 1907	\$1.00
"Classification of Operating Expenses, Operating Revenues and Expenditures for Road and Equipment for the Use of Electric Railways," 1909.....	Out of print.
"Classification of Operating Expenses, Operating Revenues and Expenditures for Road and Equipment for the Use of Electric Railways," 1912.....	Out of print.
"Standards and Recommended Practices Prepared and Adopted by the American Street and Interurban Railway Engineering Association at the 1907 and 1908 Conventions".....	\$.25
"Index of Rules 32, 33 and 34 of 'National Electrical Code' adopted at Convention, October, 1909,".....	.10
"Standard Code of Rules City Operation" 1909.....	Out of print.
"Standard Code of Rules City Operation" 1910.....	\$.20
"Standard Code of Rules City Operation," 1911.....	.20
"Standard Code of Rules City Operation," 1912.....	.20
"Standard Code of Rules City Operation," 1913.....	.20
*"Standard Code of Rules City Operation," 1914.....	.26
"Standard Code of Rules Interurban Operation," 1909.....	.20
"Standard Code of Rules Interurban Operation," 1910.....	Out of print.
"Standard Code of Rules Interurban Operation," 1911.....	\$.20
"Standard Code of Rules Interurban Operation," 1912.....	.20
*"Standard Code of Rules Interurban Operation," 1914.....	.40
"Addresses of the Presidents," containing addresses of Hon. W. Caryl Ely, W. B. Brockway, H. H. Adams, S. L. Rhoades, C. C. Peirce, delivered at the 1906 Convention....	.25
"Report of the Committee on Municipal Ownership" made to the 1906 Convention.....	.25
"Municipal Ownership in Great Britain and the United States" an address by W. J. Clark, delivered before the 1907 Convention .....	.25
"The Future of the American Street and Interurban Railway Association," by James F. Shaw, reprinted from the Electric Railway Journal of January 9, 1909.....	—
"Electric Railway Progress and the Growing Influence of the Association," address by Hon. James F. Shaw, delivered before 1909 Convention.....	—

* Prices on these books in quantities and bearing Company name are quoted on pages 49 and 50.

"The Fare Question," containing "The Value of The Association's Work," by Hon. W. Caryl Ely; "The Reasons for Increased Fares in Massachusetts," from <i>Electric Railway Journal</i> ; "Street Railway Conditions With Reference to Rates of Fare in Massachusetts," by P. F. Sullivan; "Financial Problems Confronting The Boston Elevated Railway Company," by C. S. Sergeant; "Action Necessary to Secure a Reasonable Return on Investment," by Charles V. Weston, 1909	\$.25
"Some Questions of Today," containing "The Association, Public Opinion and General Conditions," by Hon. James F. Shaw; "Public Service Commissions," by P. F. Sullivan; "The Fare Question," by William J. Clark; "A Fair Return Upon the Investment," by C. S. Sergeant; "The Treatment of Depreciation," by F. R. Ford, 1910 .....	.25
"The Electric Railway Situation, a Review of the Problems of the Year," by C. S. Sergeant, C. L. S. Tingley, R. P. Stevens, W. H. Glenn, Thomas N. McCarter, Charles O. Kruger, John Blair MacAfee, Arthur W. Brady, Edwin S. Webster, John A. Beeler, Willison Fish, and Frank R. Ford, reprinted from the <i>Electric Railway Journal</i> of January 1, 1910. ....	.25
"Publicity, Problems and Progress," containing "The Association and The Industry," by Hon. James F. Shaw; "The Theory of Street Railway Rate Regulation as Developed in the Coney Island Fare Case," by Frank R. Ford; "The Public Side of Street Railroading," by Patrick Calhoun; "Street Railway Franchises," by Charles V. Weston; "What Interurban Railways Do for the Public," by Joseph A. McGowan; "Taxes and Licenses," by G. E. Tripp; Report of Committee on Interstate Commerce Commission Affairs, 1910 .....	.25
"The Adjustment of American Street Railway Rates to the Expansion of City Areas" an address by George H. Davis, before the Mid-Year Conference, 1911 .....	.25
"The American Electric Railway Association and Its Work" an address by Arthur W. Brady, before the 1911 Convention	—
"Problems of the Industry," containing "The American Electric Railway Association and Its Work," by Arthur W. Brady; "The Interurban," by Charles L. Henry; "Measures For The Welfare of Employes," by Daniel T. Pierce; "The Hudson and Manhattan Tunnels," by J. Vipond Davies; "The Toledo Street Railway Situation," by Albion E. Lang; "The Effect of Electric Railway Operation on Taxable City Property," by Gen'l George H. Harries; "Physical Valuations," by Oscar T. Crosby; "Overhead Charges," by Prof. Mortimer E. Cooley; Report of Committee on Federal Relations, 1911 .....	.25
"Public Policies and Public Utilities," an address by Oscar T. Crosby, on the trip of the Executive Officers, 1912 .....	.25
"Electric Railway Securities," an address by Morrell W. Gaines, before the 1912 Convention .....	.25
"Determining The Proper Basis for Rates and Fares," report of Committee 1911. ....	.25
"Determining The Proper Basis for Rates and Fares"—Report of Committee 1912 .....	.25
"Depreciation Estimates," by Edwin Gruhl, reprinted from AERA, of March, 1913 .....	.10

"The American Electric Railway Association and its Work," 1911, by Arthur W. Brady.....	.10
"Franchise Values," by William W. Wherry, Jr., 1913.....	.10
"Electric Railway Securities From the Investor's Viewpoint," by Arthur M. Harris, 1913.....	.10
"Railways and Reporters," by George A. Glynn, Reprinted from AERA, October, 1913.....	.25
"Maximum Organization Efficiency," by Martin Schreiber. Reprinted from AERA, of October and November, 1913.....	.10
"The Present-Day Problems of the Electric Railway Industry," by Thomas N. McCarter, 1912.....	.10
"Organizing an Industry is What Company Sections Means," containing articles by C. N. Duffy and H. C. Donecker, 1912	Free.
"Boosting an Industry," containing list of member and non-member companies, etc., 1913.....	Free.
"A Word to the Electric Railway Man," containing benefits and privileges of individual membership, directions for affiliation, etc., 1914.....	Free.
"Regulation vs. Profit Sharing," by Hon. Halford Erickson, Member Railroad Commission of Wisconsin, with a Discussion by Arthur W. Brady and C. M. Rosecrantz, reprinted from AERA, of March, 1914.....	.25
"The Effect of Rate of Fare on Riding Habit," by F. W. Hild, with a Discussion by Luther R. Nash, R. B. Stearns and F. R. Coates, Reprinted from AERA, of March, 1914.....	.25
"Your Duty to Yourself," by George J. Roberts, Address to Public Service Railway Company Section, March, 1914.....	.10
"Standard Grooved Girder Rails," by Martin Schreiber, Reprinted from AERA, April, 1914.....	.25
"Public Utility Problems," by Thomas N. McCarter, an Address before the Finance Forum, West Side, Y. M. C. A., New York, Reprinted from AERA, May, 1914.....	.10
"The Reason Why," a pamphlet showing advantages of individual membership in A. E. R. A.....	Free
"Applying the Test," a pamphlet showing advantages of company membership in A. E. R. A.....	Free
"A Word to the Railway Man," a recital of the benefits of individual membership.....	Free
"Public Service and Publicity," an address by N. C. Kingsbury, before the Mid-Year Conference, 1915.....	.25
"Recent Legislation as Affecting Public Utilities," an address by Hon. John W. Weeks, before the Mid-Year Conference, 1915	.25
"Duties of the Company Surgeon," by Larkin W. Glazebrook, M. D., Reprinted from AERA, March, 1915.....	.25
"Cost of Service of the Jitney Bus," Bureau of Fare Research.	.25
"Mr. Electric Railway Man," a plea for company sections, out of print.	

Proceedings of Conventions

The proceedings of the annual conventions of the various associations are published as soon after each convention as they can be revised and compiled. Since 1910, a separate

volume has been issued, for each association. Before that time and after the reorganization, the proceedings of several associations were bound in the same volume.

The Method of Distribution is as follows :

First. Company Members receive free a number of sets in ratio to the dues paid which in turn depend upon their gross receipts. The following table shows the distribution :

Companies paying dues of \$25 to \$75 inclusive, 1 set.
Companies paying dues of \$125 to \$225 inclusive, 2 sets.
Companies paying dues of \$275 to \$375 inclusive, 3 sets.
Companies paying dues of \$425 to \$525 inclusive, 4 sets.
Companies paying dues of \$575 to \$750 inclusive, 5 sets.

Second. Individual members receive free the proceedings of the particular Association, with which they are affiliated. If they are affiliated with more than one Association, they receive the proceedings of each such Association.

Third. Company and individual members have the privilege of purchasing at cost extra sets or volumes of proceedings and in the case of individual members, the proceedings of any of the various Associations, whether or not they are affiliated with them.

Fourth. Such cost price varies from year to year, with the extent of the proceedings and the number of volumes issued.

Cumulative Indices are printed in each volume showing papers read, addresses delivered and reports made at each convention of the Association since its organization. These are of immense value to the student of electric railway history and show as nothing else shows the development and progress of the industry. Appended is a list of the volumes published and the prices for which they may be purchased, if they are still in print. The list in connection with the cumulative indices indicates which of the reports, etc., are now available to the purchaser :

1882-3 Out of Print.	
1883-4 Out of Print.	
*1884-5 Out of Print.	PRICE.
*1885-6 199 pages octavo.....	\$1.00
*1886-7 128 pages octavo.....	.50
*1887-8 186 pages octavo.....	1.00

* The early proceedings of the Association are published in sets of six volumes.

The Proceedings from 1884 to 1906, inclusive, six volumes, may be purchased, cloth, \$25.00; half morocco, \$30.00 per set.

The Proceedings from 1885 to 1906, inclusive, six volumes, may be purchased, cloth, \$20.00 per set.

	PRICE
*1888-9 178 pages octavo.....	\$1.00
*1888-90 162 pages octavo.....	.75
*1890-1 177 pages octavo.....	1.00
*1891-2 229 pages octavo.....	1.25
*1892-3 248 pages octavo.....	1.50
*1893-4 210 pages octavo.....	1.50
*1894-5 261 pages octavo.....	1.00
*1895-6 278 pages octavo.....	1.25
*1896-7 214 pages octavo.....	1.25
*1897-8 266 pages octavo.....	1.25
*1898-9 255 pages octavo.....	1.25
*1899-00 219 pages octavo.....	1.50
*1900-1 276 pages.....	Out of Print.
*1901-2 342 pages octavo.....	1.50
*1902-3 343 pages octavo.....	1.50
*1903-4 343 pages.....	Out of Print.
*1904-5 301 pages octavo.....	1.50
*1905-6 453 pages octavo.....	1.50
1906 —	
Vol. 1 — American and Engineering Associations, 472+255 pages, octavo, cloth.....	\$4.00
Vol. 2 — Accountants and Claim Agents Associations, 252+ 70+253 pages, octavo, cloth.....	4.00
1907 —	
Vol. 1 — American and Engineering Associations, 408+366 pages, octavo, cloth.....	4.00
Vol. 2 — Accountants and Claim Agents Associations, 240+206 pages, octavo, cloth.....	4.00
1908 —	
Vol. 1 — Engineering and Transportation and Traffic Associa- tions, 483+402 pages, octavo, cloth.....	4.00
Vol. 2 — Accountants and Claim Agents Association, 202+254 pages, octavo, cloth.....	4.00
Vol. 3 — American Association, 301 pages, octavo, cloth.....	2.50
1909 —	
Vol. 1 — Engineering and Transportation and Traffic Associa- tions, 573+386 pages, octavo, cloth.....	4.00
Vol. 2 — Accountants and Claim Agents Associations, 209+218 pages, octavo, cloth.....	4.00
Vol. 3 — American Association, 384 pages, octavo, cloth.....	2.50
1910 —	
Vol. 1 — American Association, 517 pages, octavo, cloth.....	2.50
Vol. 2 — Accountants Association, 282 pages, octavo, cloth....	2.00
Vol. 3 — Engineering Association, 653 pages, octavo, cloth....	3.50
Vol. 4 — Claim Agents Association, 238 pages, octavo, cloth..	2.00
Vol. 5 — Transportation and Traffic Association, 390 pages, octavo, cloth	2.50

* The early proceedings of the Association are published in sets of six volumes.
The Proceedings from 1884 to 1906, inclusive, six volumes, may be purchased, cloth, \$25.00; half morocco, \$30.00 per set.
The Proceedings from 1885 to 1906, inclusive, six volumes, may be purchased, cloth, \$20.00 per set.

1911 —	PRICE
Vol. 1 — American Association, 585 pages, octavo, cloth.....	\$2.50
Vol. 2 — Accountants Association, 314 pages, octavo, cloth....	2.00
Vol. 3 — Engineering Association, 975 pages, octavo, cloth....	3.50
Vol. 4 — Claim Agents Association, 193 pages, octavo, cloth..	2.00
Vol. 5 — Transportation and Traffic Association, 615 pages, octavo, cloth	2.50
1912 —	
Vol. 1 — American Association, 587 pages, octavo, cloth.....	2.50
Vol. 2 — Accountants Association, 322 pages, octavo, cloth....	2.00
Vol. 3 — Engineering Association, 979 pages, octavo, cloth....	3.50
Vol. 4 — Claim Agents Association, 372 pages, octavo, cloth..	2.00
Vol. 5 — Transportation and Traffic Association, 489 pages, octavo, cloth	2.50
1913 —	
Vol. 1 — American Association, 378 pages, octavo, cloth.....	2.50
Vol. 2 — Accountants Association, 313 pages, octavo, cloth....	2.00
Vol. 3 — Engineering Association, 675 pages, octavo, cloth....	3.50
Vol. 4 — Claims Association, 172 pages, octavo, cloth.....	2.00
Vol. 5 — Transportation and Traffic Association, 532 pages, octavo, cloth	2.50
Vol. 6 — Year Book, 309 pages, octavo, cloth.....	2.50
1914 —	
Vol. 1 — American Association, 316 pages, octavo, cloth.....	2.50
Vol. 2 — Accountants Association, 202 pages, octavo, cloth....	2.00
Vol. 3 — Engineering Association, 582 pages, octavo, cloth....	3.50
Vol. 4 — Claims Association, 170 pages, octavo, cloth.....	2.00
Vol. 5 — Transportation and Traffic Association, 463 pages, octavo, cloth	2.50
Vol. 6 — Year Book, 315 pages, octavo, cloth.....	2.50
1915 —	
Vol. 1 — American Association, 280 pages, octavo, cloth.....	2.50
Vol. 2 — Accountants Association, 195 pages, octavo, cloth....	2.00
Vol. 3 — Engineering Association, 655 pages, octavo, cloth....	3.50
Vol. 4 — Claims Association, 172 pages, octavo, cloth.....	2.00
Vol. 5 — Transportation and Traffic Association, 341 pages, octavo, cloth	2.50
Vol. 6 — Year Book, 306 pages, octavo, cloth.....	2.50

THE YEAR BOOK

The Year Book is an annual publication of the Association which was first issued for the year 1913-14. It is intended to be a record of information concerning the Association and its affairs. It is revised each year by emendation and additions and is for the information of members and others interested in the affairs of the organization. It is distributed free to member companies on the same basis, as are the proceedings. It is for sale to individual members at cost price.

Note.—Many papers and committee reports presented at the annual conventions are issued in advance. Such of these advance papers as are available are for sale at 25 cents each.

AERA

AERA is the monthly magazine of the Association. Its publication is under the direction of the Secretary of the Association and an Advisory Committee, upon which each affiliated and allied association is represented. It is under the immediate charge of an editor. Its general policy is set forth in the report of the AERA Advisory Committee to the 1913 Convention, as follows:

First.—To act as medium of communication between the officers and members of the Association in the presentation of matters affecting the organization, in the dissemination of Association news and the creation of interest in Association affairs.

Second.—To educate the members of the Association in the problems which the industry faces and in means and methods of solving such problems.

Third.—To present to the public, in so great a degree as is possible, through AERA's circulation, the Electric Railway's side of the controversies that are being waged, and to educate the public to the fundamental facts affecting the industry.

Fourth.—To practically assist Association members in the technique of their work by printing such contributed articles as may be of benefit in illustrating methods and means.

The First Number of Aera appeared in August, 1912, and it completed its third volume with the July, 1915, issue, during which time, there has been printed 3,960 pages of reading matter, exclusive of the list of officers, committees, etc. In its second volume, 229 questions were propounded in its Question Box. To these 1,893 answers were received from 326 members of the Association, an increase over the previous year of 594 answers and 68 contributors.

Aera's Subscription List includes every member of the Association, part of the annual dues being paid for that purpose. The yearly subscription price is \$2; single copies 25 cents.

The Question Box is an important part of AERA. This appears in each issue of the magazine and consists of questions propounded either by company or individual members and answered by company or individual members.

It is divided into the following sections and subsections:

Accounting.

Engineering — Buildings and Structures, Way Matters, Power Generation, Power Distribution, Equipment.

Transportation.

Miscellaneous.

The Question Box is open to all questions relating to the management and operation of electric railways and forms a valuable compendium of information, concerning electric railway practice and theory. At the end of each volume of AERA is printed a cumulative index, by subjects of the information contained therein. The value of the Question Box and its index is indicated by the fact that the answers to the questions are based on the actual operating experiences of practical railway managers and operators.

Advertising has been taken for AERA since January, 1914. The magazine is a valuable medium for manufacturers and others desirous of reaching the electric railway purchasing field. AERA is really a forum for the discussion of questions of practice and method and through the advertising pages the seller of supplies and appliances has an opportunity to participate in the discussion.

Advertising Rates will be sent on application.

Harlow C. Clark is Editor of AERA.
Edward Rolfe is Advertising Manager.

THE ENGINEERING MANUAL

The Engineering Manual, prepared under the direction of the Committee on Standards of the Engineering Association is a codification of the Standards and Recommendations of the Engineering Association.

It contains all standards set by the Association, all practices recommended by it, and those practices which, while they have not been formally adopted either as standards or recommendations, have been discussed and put forward by the Association's various committees.

The Manual is in Loose Leaf Form and consists of printed matter, drawings and illustrations. All drawings are so printed that they may be used for making blue prints. A complete system of indices and identification makes the information contained in the Manual immediately available.

The Manual will be revised each year by the Committee on Standards, and will thus be kept always up to date.

The Method of Distribution is:

Company members each receive free one Manual complete with binder and such additions and amended sheets as are issued.

Individual members of the Engineering Association will receive free each year such additions and amended sheets as may be issued, upon request to the Secretary of the Association. They may purchase the binders at \$1 each.

Extra copies of the sections may be purchased by members at 25 cents for sections dealing with "Rules and Regulations for Employees of Way Department;" 25 cents for section covering "Specification for Overhead Crossings of Electric Light and Power Lines," 25 cents for section giving "Copper Wire Tables." All other sections 10 cents. To non-members these prices are doubled. The price of the entire publication, \$1.00 to members of any of the associations, and \$4.00 to non-members, plus \$1.00 for the binder.

The following **Table of Contents** shows the material contained in the Manual.

(Standards and Recommendations are shown in full face type.)

BUILDINGS AND STRUCTURES**SECTION No.**

- Bc 1a** Proper Facilities for Employees in Car Houses.
- Bm 1b** Codification of Underwriters' Rules Relating to Car and Car House Wiring.
- Bm 2c** Rules for Instruction to Employees for Fire Protection.
- Bm 3a** Economical Maintenance of Buildings.
- Bm 4a** General Specifications and Form of Contract for Railway Structures.
- Bt 1a** Urban and Interurban Passenger Terminals.
- Bt 2a** Fire Protection of Car Houses and Terminals, including Open Yards.

POWER DISTRIBUTION

- Df 1a** Clinched Ears for Round Trolley Wire.
- Df 2b** Specification for Galvanizing or Sherardizing on Iron or Steel.
- Df 3a** Design of Cap and Cone Insulators.
- Df 4a** Specification for Overhead Line Material.
 - (a) Iron and Steel Fittings.
 - (b) Wood Cross Arms.
- Dm 1a** Line Lightning Arresters.
- Ds 1b** Specification for Overhead Crossings of Electric Light and Power Lines.
- Ds 2b** Specification for 600 Volt Direct Current Overhead Trolley Construction.

SECTION NO.

- Ds 3b** Selection of Poles for Trolley Line Construction.
- Ds 4a** Specification for Wood Poles.
 Part I — Chestnut Poles.
 Part II — Eastern White Cedar Poles.
 Part III — Western White Cedar Poles.
- Ds 5b** Specification for Tubular Steel Poles.
- Ds 6a** Diagram of Clearances for Overhead Working Conductors.
- Ds 7a** Specifications for Joint Use of Wood Poles.
- Du 1a** Specification for Electrical Conduit Construction.
- Dw 1c** Sections of Grooved Trolley Wire.
- Dw 2c** Copper Wire Tables.
- Dw 3b** Specification for Round and Grooved High Conductivity Trolley Wire.
- Dw 4c** Specification for High Voltage, Three-Conductor, Paper Insulated Lead Covered Cable.
- Dw 5b** Specification for Single Conductor, Paper Insulated, Lead Covered Cable for 1200 Volts.
- Dw 6b** Electric Wire and Cable Terminology.
- Dw 7a** Hard Drawn Aluminum Wire Table.
- Dw 8a** Specification for Rubber Insulated Wire and Cable for Power Distribution Purposes.

EQUIPMENT

- Eb 1a** Brake Shoes, Brake Shoe Heads and Keys.
- Eb 2a** Inspection of Brakes.
- Eb 3a** Air Compressor Maintenance and Inspection.
- Eb 4b** Specification for Air Brake Hose.
- Ec 1b** Dimensions for Cars, Including Heights of Couplers, Bumpers and Platforms.
 Part I — Height of Couplers for City Cars.
 Part II — Height of Platforms and Interurban Cars.
 Part III — Height of Bumpers for City and Interurban Cars.
- Ec 2b** Automatic Couplers for Interurban Cars and Radial Draft Rigging, Including M. C. B. Specifications for Couplers.
- Ec 3a** Comparison of Car Weights and Seating Capacity.
- Ec 4a** Specification for the Location of End Connections on Interurban Cars for Roads Engaged in the Interchange of Cars.
- Ec 5a** Effect of Car Design on Duration of Stops.
- Ee 1b** Repairs of Armatures.
- Ee 2c** Commutators.
- Ee 3b** Insulating Materials for Railway Repair Shop Use.

SECTION No.

- Ee 4b** **Practical Rules for Overhauling and Inspection of Electrical Equipment for the Guidance of Car House Employees.**
- Ee 5a** **Inspection and Lubrication of Gears and Pinions.**
- Ee 6b** **Protective Devices for Car Equipments.**
- Ee 11b** **Wires and Cables for Car Equipment.**
- Ee 7a** **Lubrication of Motors.**
- Ee 8a** **Armature and Axle Liners.**
- Ee 9a** **Specification for Trolley Wheels.**
- Ee 10a** **Taper for Bore of Pinions.**
- Em 1b** **Rules and Regulations for Inspection of Car Equipment.**
- Em 2a** **Car House Organization.**
- Et 1a** **Journal Boxes.**
- Et 2a** **Journal and Journal Bearing Keys.**
- Et 3a** **Design of Axles.**
- Et 4a** **Design for Tread and Flange of Wheel.**
- Et 5b** **Slack Adjuster.**
- Et 6a** **Rules for Lubrication.**
- Et 7a** **Dimensions of Rolled Steel Wheels.**
- Et 8a** **Specification for Wrought Iron Bars and Limit Gauges.**
- Et 9b** **Specification for Quenched and Tempered Carbon Steel Axles, Shafts and Similar Forgings.**
- Et 10a** **Specification for Cold Rolled Steel Axles.**
- Et 11b** **Specification for Annealed Carbon Steel Axles, Shafts and Similar Forgings.**
- Et 12a** **Specification for Solid Wrought Carbon Steel Wheels for Electric Railway Service.**
- Et 13a** **Proof Testing of Forgings to Determine their Soundness after Quenching and Tempering.**
- Et 14a** **Specification for Case Hardened Forged Steel Gears.**
- Et 15a** **Specifications for Quenched and Tempered Forged Carbon Steel Gears.**
- Et 16a** **Specification for Case Hardened Forged Steel Pinions.**
- Et 17a** **Specification for Quenched and Tempered Forged Carbon Steel Pinions.**

POWER GENERATION

- Gb 1a** **Specification for Lapwelded and Seamless Boiler Tubes.**
- Gb 2a** **Specifications and Contract for Purchase of Fuel.**

BLOCK SIGNALS

- Ss 1a** **Aspects for Two-Position Signaling.**
- Ss 2a** **Use of Semaphore Signals.**
- Ss 3a** **Fundamental Indications in Signaling.**
- Ss 4a** **Aspects in Three-Position Signaling.**

SECTION NO.

- Ss 5b** Light Aspects in Three-Position Signaling Employing Signals Operated by Contactors.
- Ss 6a** Light Aspects for Car Spacing Signals Operated by Contactors.
- Ss 7b** Use of Continuous Track Circuits for the Control of Automatic Signals for High Speed Interurban Service.
- Ss 8a** Methods of Signaling Single-Track Suburban Railways for Headway Between 5 and 20 Minutes and Speed not Exceeding 20 Miles Per Hour.
- Ss 9a** Methods of Signaling Double-Track Suburban Railways for Headway Between 1 and 10 Minutes and Speed not Exceeding 30 Miles Per Hour.
- Ss 10a** Methods for Signaling Single-Track Interurban Railways for Headway Not Less Than one Hour and Speed 40 to 60 Miles Per Hour.
- Ss 11a** Methods for Signaling Single-Track Interurban Railways for Headway as Frequent as 15 Minutes for Trains in Several Sections and Speed 40 to 60 Miles Per Hour.
- Ss 12a** Methods for Signaling Double-Track Interurban Railways for Headway as Frequent as 5 Minutes and Speed 40 to 60 Miles Per Hour.
- Ss 13a** Sizes of Lenses for Use in Light Signals.
- Ss 14a** Design of Signal Apparatus.

WAY MATTERS

- W3d 1c** Location of and Clearances for Third Rail Working Conductors, Structures and Rolling Equipment.
- W3d 2b** Third Rail Terminology.
- W3d 3a** Protection of Contact Rail Where Protected Third Rail is Used.
- Wf 1a** Designs of Proper Foundation for Tracks in Paved Streets.
- Wf 2a** Classification and Bearing Power of Soils.
- Wm 1a** Rules and Regulations for the Government of Employees of the Way Department.
- Wm 2a** Symbols for Recording Surveys.
- Wm 3a** Specifications for Splice Bars for Girder and High T-Rails.
- Wm 4b** Design for Joint Plates for Seven-Inch Girder Grooved and Guard Rails.
- Wm 5a** Design for Joint Plates for Nine-Inch Girder Grooved and Guard Rails.
- Wm 6a** Design for Joint Plates for Seven-Inch 80 and 90 lb. Plain Girder Rails.
- Wm 7a** Drilling for Standard Section Rails.

SECTION No.	
Wr 1b	Recommended Designs for Plain Girder Rails for Use in Paved Streets. Part I—Use of Plain Girder Rails in Paved Streets. Part II—Designs of Plain Girder Rails.
Wr 2c	Specification for the Manufacture of Open-Hearth Girder and High T-Rails.
Wr 3b	Nine-Inch Girder Grooved Rail.
Wr 4b	Seven-Inch Girder Grooved Rail.
Wr 5a	Nine-Inch Girder Guard Rail.
Wr 6a	Seven-Inch Girder Guard Rail.
Ws 1a	Layouts for Track Switches, Mates and Frogs.
Ws 2a	Rules for Determining Gauge of Track on Curves.
Ws 3a	A Uniform Method for Designating Compromise Joints.
Ws 4a	Specifications for Special Work.
	Index of Related Subjects for Location in Proceedings.
	General Index.

EMPLOYMENT BLANKS

At the 1909 Convention of the Transportation and Traffic Association, Standard Employment, Reference and Physical Examination Blanks for Transportation Employees were adopted. The Association has arranged to furnish these blanks to member companies at the actual cost of printing. A pamphlet containing samples of all of these forms will be sent upon application.

The Prices of the blanks are as follows:

(a) Application for Employment	\$5 50 per M.
(b) Reference Inquiry (sent to previous employer)	3 00 per M.
(c) Reference Release (sent to previous employer)	2 50 per M.
(d) Reference Inquiry (sent to individual named as reference)	3 00 per M.
(e) Record of Examination of Sight, Color Sense and Hearing	3 00 per M.
(f) Surgeon's Certificate of Examination.	3 00 per M.
(g) Instructions to Surgeon	3 00 per M.
(65c. per M., extra for padding.)	

RULE BOOKS

The Association is prepared to sell Rule Books in either paper, cloth or flexible leather covers to Member Companies. The name of the company is printed on the outside cover in

gold and on the fly leaf, while upon the inside of the front cover is printed this form:

RULE BOOK

Rule Book No. —

This Book is the Property of the

— Company

And is issued to

Name

Position

Division

Who hereby agrees to return it to the proper officer of the Company, when called for or upon leaving the service.

The Prices at which books will be sold to Member Companies are:

City Rules

<i>Quantities.</i>	<i>Paper.</i>	<i>Cloth.</i>	<i>Flexible Leather.</i>
25 copies	26¢ ea.	41¢ ea.	55¢ ea.
50 copies	18¢ ea.	34¢ ea.	43¢ ea.
100 copies	14¢ ea.	24¢ ea.	34¢ ea.
200 copies	12¢ ea.	21¢ ea.	29¢ ea.
500 or more copies	10¢ ea.	16¢ ea.	26¢ ea.

Interurban Rules

<i>Quantities.</i>	<i>Paper.</i>	<i>Cloth.</i>	<i>Flexible Leather.</i>
25 copies	40¢ ea.	53¢ ea.	70¢ ea.
50 copies	32¢ ea.	43¢ ea.	56¢ ea.
100 copies	25¢ ea.	35¢ ea.	45¢ ea.
200 copies	22¢ ea.	31¢ ea.	40¢ ea.
500 or more copies	20¢ ea.	27¢ ea.	36¢ ea.

STANDARD CLASSIFICATION OF ACCOUNTS

The Revised Uniform Classification of the Interstate Commerce Commission, prepared in consultation with a Committee of the Accountants' Association and put into effect July, 1914, was adopted as Standard by the Accountants' Association at the 1914 Convention. A pamphlet containing this classification, together with other information relative thereto has been issued by the Association and is for sale on application to the Secretary.

PUBLICITY FOR THE INDUSTRY

In connection with AERA, a system of securing publicity for the railways' position in regard to many of the pressing problems of the industry has been inaugurated.

Clipping Sheets containing excerpts from articles appearing in AERA are sent to more than 1,200 newspapers published in cities on the lines of member companies and have been fairly extensively used.

In addition, these sheets as well as other matter are sent to member companies with the request that they endeavor to secure publication in the local papers. The matter thus sent out is prepared in form for newspaper use and the idea of "news value" is kept constantly in mind. In many cases such matter is of a sort that can be given a local application by slight revision, or by the addition of the names of officers of the local companies.

The importance of this method of securing publicity is strongly felt by the officers of the Association, and the co-operation of company members is most urgently requested.

BLANKS AND FORMS COLLECTION

There is maintained in the office of the Secretary the most extensive collection of blanks and forms for use of electric railway companies now extant. The collection was made under the direction of the Accountants' Association's Committee on Blanks and Forms and is arranged in sixteen books.

The Rules Governing Use of the collection by Member Companies are:

At the request of the Member Company, any book or books shown in appended list will be sent to it by express. It is to be returned by express within a reasonable length of time, the Member Company to pay all express charges.

The Classification of the Blanks, their division in the various books and the nature of the blanks is shown in the following list:

Book 100 — Income A.

No. 105. *Conductors' Reports* — Day card, Trip slip, Trip report or Trip sheet. These reports show the number of trips, the car number, their destination, the leaving time, the various tickets, including transfers, collected, cash received, and register readings.

No. 110. *Station Agents' Report* — Record of business for the month, including ticket sales; daily and monthly reports of business, showing receipts from passengers, freight, express, etc.

No. 115. *Route Numbers and Tariffs* — Route numbers; rates of fare; rates for chartered cars.

No. 120. *Special Car Reports* — Orders for special or chartered cars; memorandum of agreement; conductors' report; foreman's report of special car run.

No. 125. *Conductors' Remittance Slips* — A form on which the conductor gives the amount in detail of his daily collection of tickets and cash; a receipt given the conductor for his remittance.

No. 130. *Conductors' Envelopes* — Envelopes used for turning in transfers, tickets, or cash or all, either by trips or daily; station agents' envelopes used for remittances; tags for conductors' remittance bags.

No. 135. *Counters' and Receivers' Reports* — Counter or receiver, the person who receives and counts conductors' daily remittances; reporting the conductors' names and amount received on the various lines run; report of total receipts to auditor. (See also shorts and overs 165.)

No. 140. *Ticket Sales* — Report to treasurer or auditor of daily or monthly ticket sales, and receipts for same.

No. 145. *Daily Report of Earnings* — Earnings by lines showing trips and miles run, car hours, tickets, and cash received; summary of daily

receipts including ticket sales, chartered cars, and receipts from other sources.

No. 150. *Weekly Report of Earnings*—These reports include the same items as the daily report, but cover a week.

No. 155. *Monthly Report of Earnings*—Earnings by line for each day of the month, showing trips, miles run, car hours, tickets and cash received; also showing earnings by lines for the 12 months—and giving the total for the year; earnings from passengers and freight from stations.

No. 160. *Park and Amusement Receipts*—Report of earnings of park and amusement resorts.

No. 165. *Shorts and Overs*—Reports of counters and receivers showing the amount due from or overpaid by conductors in their daily settlements of cash and transfers; notices to conductors; also record of conductors' errors.

Book 200—Income B.

No. 205. *Tickets*—Tickets for 5-cent local fares, children's tickets, special workmen's tickets, etc.

No. 210. *Interurban Tickets*—Either a coupon ticket with one or more coupons for the various points, a ticket on which the destinations are punched, either duplex or plain, or a ticket that is torn to show the destination.

No. 215. *Commutation Ticket Books*—Tickets in book form either good for a definite time or until used, usually one coupon for a 5-cent fare.

No. 220. *Passes*—A card-pass for employes or other persons, usually an annual; a one-way or round-trip pass limited to time and destination, or a coupon pass book.

No. 225. *Employes' Tickets*—Either in book form with coupons, in strips, or single tickets; limited or unlimited, as to time and destination.

No. 230. *Miscellaneous Tickets*—Special tickets of various kinds, including complimentary letter-carrier, police, fireman, etc.; dog tickets or permits, tickets used at summer resorts, etc.; tickets used in connection with railroads, steamboats or trolley lines of other companies.

No. 235. *Pupils' Tickets*—Usually a 2½ or 3-cent ticket with same privileges as a 5-cent ticket, but restricted as to use; application for tickets and certificate from school.

No. 240. *Transfer Tickets*—Good for continuous passage from transfer point on next car, etc.

No. 245. *Transfer Instructions*—Instructions regarding the use of transfer tickets.

No. 250. *Miscellaneous Income*—Explained by heading.

No. 255. *Application for Passes*—Application for passes for employes.

No. 260. *Requisition for Tickets*—Requests from station agents and others for tickets.

No. 265. *Employes' Tickets Reports*—Report of tickets issued to employes.

No. 270. *Ticket and Transfer Record*—Records of tickets and transfers issued.

No. 275. *Register Records*—Daily report of register readings.

Book 300 — Labor A.

No. 305. *Applications* — Application for position as conductor or motorman or other car service work; also position in mechanical department and power house.

No. 310. *Requisitions for Men* — Requests for extra men for service.

No. 315. *References* — Certificate given employes who have left the service; requests for references regarding a person seeking employment.

No. 320. *Physical Examination* — Requests for physical examination for service with the company or benefit association and reports or certificates of examination made.

No. 325. *Agreements* — Agreements between company and men.

No. 330. *Appointments* — Notice of appointment; certificate of apprenticeship.

No. 335. *Receipts for Deposits, Badges, etc.* — Employee's receipt for, also receipt given to employes for, deposits, badges and other property of the company.

No. 340. *Recommendation of Advancement* — Advancement recommended or asked for.

No. 345. *Excused List* — Application for leave of absence, granting of application and record of same.

No. 350. *Disciplining* — Suspensions, complaints, resignations, discharges, reinstated.

No. 355. *Employes' Record* — Names, addresses and record of individual employes.

No. 360. *Record of Employers* — Record of names of employers.

Book 400 — Labor B.

No. 405. *Time Books* — Time books used by timekeepers, foremen, or individual employes, daily, weekly or monthly.

No. 410. *Time Cards* — Daily, weekly or monthly cards used by individual employes in shop, giving hours worked and the kind of work done; trainmen's time cards giving hours and minutes worked.

No. 415. *Time Reports* — Foremen's daily report of trainmen's time, also time of electricians, trackmen and shopmen.

No. 420. *Time Records and Distribution* — Distribution of pay-rolls to various expense accounts; distribution of trainmen's time to various lines or divisions.

No. 425. *Pay-roll Comparisons* — Comparison of number of employes, or amounts paid, with same period last year.

No. 430. *Pay-roll and Time Checks* — Pay-roll sheets showing name, occupation, hours worked, rate, amount and signature; foreman's time check, an order on paymaster for wages due, not previously reported; foreman's notice of discharge.

No. 435. *Methods of Paying* — Checks on bank for wages; receipt for wages; pay envelopes; tables for figuring wages.

No. 440. *Pay-roll Summaries* — Summary of pay-rolls for several divisions or departments.

No. 445. *Unclaimed Wages* — List of unclaimed wages; receipts for unclaimed wages.

Book 500 — Material.

No. 505. *Requisition for Supplies*— Requisition on general manager or purchasing agent by storekeeper for supplies for storeroom.

No. 510. *Quotations*— Requests for prices with form for quotation.

No. 515. *Purchasing Agents' Orders*— Orders of the general manager, superintendent, or purchasing agent for supplies, also record of orders.

No. 520. *Shipping Manifest*— Memorandum or list of supplies shipped to storeroom.

No. 525. *Requests for Invoices*— Requests for invoices and statements.

No. 530. *Alterations in Invoices*— Notice of alterations made for various reasons.

No. 535. *Unfilled Orders*— Requests for information regarding unfilled or back orders.

No. 540. *Supplies Returned*— Supplies returned to shipper.

No. 545. *Invoice Summaries*— List of invoices sent to the accounting department from the purchasing department; record of bills approved.

No. 550. *Supplies Received*— Supplies received and put into stores; old material or scrap returned to stores.

No. 555. *Requisitions on Storekeeper*— Foreman's requisition on storekeeper for supplies.

No. 560. *Storekeeper's Manifest*— Memorandum or list of supplies issued from storeroom.

No. 565. *Reports of Materials Used*— Foreman's report of materials used.

No. 570. *Materials Supplied*— Storekeeper's record and distribution of supplies issued from storeroom.

No. 575. *Stock on Hand*— Stock on hand as shown by stock card or ledger account.

No. 580. *Inventories*— Inventory of goods in stores or on hand in various departments.

Book 600 — Maintenance

No. 605. *Requests for Repairs*— Requests for general repairs; report of condition of cars, line, or track, and request for repairs needed.

No. 610. *Shop Orders*— For general or special repairs with report of labor and material used and record of same. (Also called job order.)

No. 615. *Track Department*— Inspection, report of work done and amount of labor and material.

No. 620. *Line Department*— Inspection, report of work done, amount of labor and material; report of emergency crew.

No. 625. *Car Shop*— Work done on car bodies and trucks; list of cars received at, and delivered from shop; reports and records. (See 640 for wheel and axle.)

No. 630. *Electrical Department*— Maintenance of electrical equipment; reports and records. (See 645 for armatures.)

No. 635. *Miscellaneous Shop Reports*— Miscellaneous reports of shop work, including small repairs made in shed. Reports of condition of equipment in shop.

No. 640. *Wheel and Axle Reports and Records*— Date removed and cause; mileage.

No. 645. *Armature Reports and Records*—Date removed and record of work done.

No. 650. *Changes in Equipment*—Trucks or electrical equipment changed from one car to another.

No. 655. *Equipment Records*—Record of equipment, when and where purchased, kind, style and size, etc. (For record of maintenance see 625, 630, 635.)

Book 700 — Power House

No. 705. *Power House*—All blanks for use at power house will be found together by companies.

Book 800 — Transportation

No. 805. *Time Tables*—Printed schedule of leaving time from various points; blank forms for filling in runs, giving time at several points. Headway, etc.

No. 810. *Assignment of Runs*—Blank forms for names of conductor and motorman for the several runs.

No. 815. *Car Starters' Reports*—Reports showing time cars on the several lines leave (pull out) and arrive (pull in) at the car barn; number of cars in service, etc.

No. 820. *Reporting List*—List of employes showing those excused or absent.

No. 825. *Despatchers' Reports*—Reports showing time cars actually pass various points, and name of crew; register of train crews and runs assigned them; train sheets.

No. 830. *Train Orders*—Despatchers' orders to trainmen.

No. 835. *Trainmen's Registers*—Trainmen's report of time worked, showing time on and off, etc.

No. 840. *Report of Condition of Cars*—Trainmen's or inspectors' report of condition of car.

No. 845. *Report of Extra Car Run*—Extra, chartered or special cars.

No. 850. *Delay Reports*—Reports of delays and causes; made by trainmen, despatcher, or superintendent, also work of wrecking crew.

No. 855. *Cars Pulled In*—Report of cars pulled in and cause.

No. 860. *Record of Trips*—Report of trips run, made by trainmen, and record of total trips on the several lines.

No. 865. *Miscellaneous Transportation Reports*—Miscellaneous reports of trainmen.

Book 900—Transportation B.

No. 905. *Instructions to Trainmen*—Books of rules giving general instructions, special instructions, and notices. Questions for trainmen to answer.

No. 910. *Secret Inspection*—Reports of inspectors and records of same.

No. 915. *Articles Found*—Tags to be put on articles found; notice sent to owner and record of same; receipt signed by owner.

- No. 920. *Track Cleaning* — Clearing snow and ice; sprinkling and sanding track.
No. 925. *Car Mileage* — Individual car, daily, by lines.
No. 930. *Stables* — Various blanks used in this department.
No. 935. *Advertising* — Folders advertising park resorts, etc., notices giving fares, etc.
No. 940. *Benefit Associations* — Application for membership; notice of sickness; claim for benefit, etc.
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Book 1000 — Injuries and Damages

- No. 1005. *Employees' Accident Reports* — Accidents to persons or damage to property as reported by trainmen.
No. 1010. *Report of Damages* — Report of damage to companies' property.
No. 1015. *Report of Accident to Employee* — Report of accident to an employee in any department.
No. 1020. *Report to Railroad Commissioners* — Report of accidents in State of New York, made to Railroad Commissioners.
No. 1025. *Witnesses' Address Cards* — Names and addresses of witnesses.
No. 1030. *Witnesses' Statements* — Statements of witnesses giving details of occurrence.
No. 1035. *Reports of Investigation* — Report as to cause of accident and condition of property after.
No. 1040. *Surgeons' Reports* — Report of surgeons on condition of persons injured.
No. 1045. *Claimants' Statement* — Statements of persons injured; affidavit of claim.
No. 1050. *Release of Responsibility* — Release of all blame attached to the company for an accident, in consideration of cash payment or not.
No. 1055. *Acknowledgment of Indebtedness* — Employees' acknowledgment of neglect and an agreement to pay a specified sum for damage done.
No. 1060. *Law Department Blanks* — Miscellaneous blanks of claim department, and law blanks and forms.
No. 1065. *Report Envelopes* — Envelopes for keeping reports of accidents, and all papers relating to each individual claim; envelopes for sending reports to claim department.
No. 1070. *Record of Claims* — Record of all accidents, and disposition of claims.
No. 1075. *Summary of Claims and Comparisons* — Summary of claims; statement of claim department; comparative statement as to cause, cost, etc.
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Book 1100 — Vouchers, Etc.

- No. 1105. *Vouchers* — Blank forms for bill of goods purchased with spaces for payment, etc., also form for receipt and backing showing distribution of charges; also voucher folders with backing.
No. 1110. *Receipts* — Receipts for cash.
No. 1115. *Accounts Receivable* — Bill form for accounts due.

- No. 1120. *Journal Entries*—Blank forms for journal entries.
 No. 1125. *Miscellaneous Office Blanks*—Office blanks not otherwise provided for.
 No. 1130. *Proxies*.
 No. 1135. *Checks*—Bank checks or drafts.
 No. 1140. *Register of Bills*—Bills approved for payment.
 No. 1145. *Treasurer's Reports*—Daily cash balances in office or bank.
 No. 1150. *Envelopes*—Envelopes for regular correspondence or special purposes.
 No. 1155. *Letter Paper*.
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Book 1200 — Monthly and Annual Reports

- No. 1205. *Comparative Statement of Earnings*—Comparative statement by lines or divisions for day, month or year.
 No. 1210. *Comparative Statement of Expenses*—Comparative statement by accounts for month or year.
 No. 1215. *Monthly and Annual Reports*—These reports cover statement of income, expenditure, cash statement, balance sheet, etc., for month or year.
 No. 1220. *Trial Balance*.
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Book 1300 — Records

- No. 1305. *Voucher Record*—Record of accounts payable with distribution to various operating and construction accounts, etc.
 No. 1310. *Distribution of Voucher*—Distribution of voucher charges to sub-accounts not shown on voucher record.
 No. 1315. *Accounts Receivable*—Record of amounts due from rents, etc.; record of accruals, interests, taxes, etc.
 No. 1320. *Cash Book*.
 No. 1325. *Journal*.
 No. 1330. *Ledger*.
 No. 1335. *Classification of Accounts*—The standard classification, the standard with changes, and additions.
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Book 1400 — Electric Lighting, Gas, Water

- No. 1405. *Solicitors' Reports*—Business solicited and secured and records of same; service discontinued.
 No. 1410. *Contracts and Agreements*—Applications, contracts, and agreements for service.
 No. 1415. *Orders to Connect, Etc.*—Orders to connect or disconnect meters, etc.
 No. 1420. *Inspectors' Reports*—Arc lamps, meters, wiring tests, and inspections of various kinds.
 No. 1425. *Reports of Work Done*—New installations; reports of trouble and repairs made.
 No. 1430. *Trimmers' Reports*—Number of lamps trimmed and material used. Lamps out of order, etc.

No. 1435. *Meter Readings* — Single readings; readings by months for the year.

No. 1440. *Lamp Record and Sales* — Record of lamps in use, renewed, or sold.

No. 1445. *Bills* — Bills; notice of bill past due.

No. 1450. *Collectors' Report* — Reports of collectors and records of cash received.

No. 1455. *Record of Power and Gas Output* — Power-station records, also output of gas, etc.

No. 1460. *Consumers' Register* — Meter readings and amount of charges each month, also discounts and cash paid; record of kind of service and meters, etc., installed.

No. 1465. *Miscellaneous Office Blanks* — Blanks and forms not otherwise provided for.

No. 1470. *Statement of Earnings and Expenses* — Daily and monthly reports.

No. 1475. *Equipment Records* — Lamps, meters, transformers, etc.

Book 1500 — Freight and Express

No. 1505. *Freight and Express* — All blanks for freight and express will be found arranged by companies.

Book 1600 — Foreign Tramways

No. 1605. *Foreign Tramways* — All blanks of the Glasgow Corporation and other Tramways will be found in this book arranged as near as possible to the scheme followed in arranging other blanks, beginning with income.

THE MID-YEAR MEETING

The Mid-Year Meeting of the Association is held usually during the month of January. It is a meeting of the American Electric Railway Association, the parent organization, and is intended to bring together the executive officers of Member Companies for the discussion of the more general financial and economic problems of the industry.

The Extent and Scope of this important meeting of the Association is indicated by the program of the Fifth Annual Mid-Year Meeting held at the New Willard Hotel, Washington, D. C., January 29, 1915, as follows:

Morning Session

10:00 A. M.—“THE CODE OF PRINCIPLES,” a paper by Col. T. S. Williams, President, Brooklyn Rapid Transit System.

Discussed by:

Mr. Guy E. Tripp, Chairman Board of Directors, Westinghouse Electric & Manufacturing Co., New York, N. Y.

Mr. M. C. Brush, Second Vice-President, Boston Elevated Railway Co., Boston, Mass.

11:00 A. M.—“PUBLIC SERVICE AND PUBLICITY,” a paper by Mr. N. C. Kingsbury, Vice-President, American Telephone & Telegraph Company, New York, N. Y.

Discussed by:

Hon. W. Caryl Ely, former President, American Electric Railway Association, Buffalo, N. Y.

Mr. E. G. Connette, President, International Railway Co., Buffalo, N. Y.

Mr. Wilbur C. Fisk, President, Hudson & Manhattan Railroad Co., New York, N. Y.

Afternoon Session

2 P. M.—“FINANCIAL LEGISLATION AS AFFECTING PUBLIC UTILITIES,” an address by Hon. John W. Weeks, United States Senator from Massachusetts, Boston, Mass.

Discussed by:

Mr. J. D. Mortimer, President, The North American Co., New York, N. Y.

Mr. J. H. Pardee, President, The J. G. White Management Corporation, New York, N. Y.

3 P. M.—ADDRESS by The President of the United States.
Both sessions in Assembly Rooms, New Willard Hotel.

Evening Session

JOINT DINNER, A. E. R. A. and A. E. R. M. A.—Mr. C. Loomis Allen, President, American Electric Railway Association, Presiding.

ADDRESS—Mr. C. C. Peirce, Vice-President, American Electric Railway Manufacturers' Association.

ADDRESS—Hon. Swager Sherley, Representative in Congress, Fifth District of Kentucky.

ANNOUNCEMENT OF THE WINNER OF THE ANTHONY N. BRADY MEDAL—Mr. Arthur Williams, President, American Museum of Safety.

ADDRESS—Hon. A. J. Montague, former Governor of Virginia and Representative in Congress, Third District of Virginia.

ADDRESS—Hon. C. L. Henry, First Vice-President, American Electric Railway Association.

Beginning with the Banquet of 1914, the American Association assumed joint direction with the Manufacturers' Association and the complimentary nature of the affair was abandoned.

THE ANNUAL CONVENTION

The Annual Conventions of the American Electric Railway Association and its allied and affiliated associations are held at such time and place as is selected by the Executive Committees of the various organizations.

Since the amalgamation and reorganization in 1905, they have all been held at the same place and during the same period.

Each association having its own organization holds its own meetings in a separate hall, except such

Joint Meetings as are held from time to time. Joint sessions have been held by the various organizations, as follows:

1909 — Accountants and Engineering.

1910 — Accountants and Engineering.

1911 — Accountants and Engineering; Accountants and Transportation and Traffic; Engineering and Transportation and Traffic.

1912 — Accountants and Engineering; Accountants and Transportation and Traffic; Engineering and Transportation and Traffic; Claims and Transportation and Traffic.

1913 — Accountants and Engineering; Accountants and Transportation and Traffic; Engineering and Transportation and Traffic.

1914 — Accountants and Engineering, Accountants and Claims, Engineering, Claims and Transportation and Traffic, Engineering and Transportation and Traffic.

1915 — Accountants and Engineering, Engineering and Transportation and Traffic, Claims and Transportation and Traffic.

For List of Conventions see Page 133.

The conventions of the various associations are the most important happening of the Association year. At them are presented all reports, officers are elected, papers and addresses read, and the work of the Association reviewed.

The American Association Meetings are held at such time as enables the members of all other associations to attend such meetings. The scope and extent of the conventions of the Association are indicated by the program of the 1915 Convention which is printed herewith:

American Association

MONDAY, OCTOBER 4TH.

9:30 A. M. to 5:00 P. M.

Registration and distribution of badges at booth in Lobby, Native Sons of the Golden West Building.

TUESDAY, OCTOBER 5TH.

Morning

Meeting held in Auditorium

9:30 A. M. to 12:30 P. M.

Convention Called to Order.

ADDRESS OF WELCOME

Hon. Chester H. Rowell, Editor Fresno Republican.

Annual Address of the President.

Annual Report of Executive Committee.

Annual Report of Secretary-Treasurer.

Appointment of Convention Committees:

- (a) Resolutions.
- (b) Nominations.
- (c) Recommendations contained in President's Address.

Reports of Committees:

- (a) Subjects.
- (b) Education.
- (c) Representing Association at the American Good Roads Congress.
- (d) Valuation.
- (e) National Joint Committee on Overhead and Underground Line Construction.

Address, "Welfare Work," by Mr. Jesse W. Lilienthal, President, United Railroads of San Francisco, San Francisco, Cal.

General Discussion.

Reports of Committees (continued):

- (f) Company Membership.
- (g) Company Section Medal.
- (h) Federal Relations.
- (i) Anthony N. Brady Medal.
- (j) Compensation for Carrying United States Mail.

WEDNESDAY, OCTOBER 6TH

Morning

Meeting held in Auditorium

9:30 A. M. to 12:30 P. M.

Reports of Committees:

- (a) Electrolysis.
- (b) Ways and Means.
- (c) Company Sections and Individual Membership.
- (d) Dues of Company Section Members.
- (e) Changes in Constitution and By-Laws.
- (f) Relations with State and Sectional Associations.
- (g) Public Relations.

Address, "Evils of Government Ownership," by Hon. Jonathan Bourne, Jr., Former United States Senator.

General Discussion.

Reports of Committees (continued):

(h) Operation of Motor Vehicles.

(i) AERA Advisory.

(j) Insurance.

(k) Standards for Car Loading.

THURSDAY, OCTOBER 7TH

Morning

Meeting held in Auditorium

9:30 A. M. to 12:30 P. M.

Reports of Committees:

(a) Cost of Passenger Transportation Service, including Report of Bureau of Fare Research.

Address, "The Foundation Principles of the Valuation of Electric Railways," by Mr. Bion J. Arnold, Chairman, Board of Supervising Engineers, Chicago Traction, Chicago, Ill.

General Discussion.

Reports of Committees (continued):

(b) Taxation Matters.

(c) On Recommendations contained in President's Address.

(d) Resolutions.

(e) Nominations.

Unfinished Business.

Election of Officers.

Installation of Officers.

Adjournment.

FRIDAY, OCTOBER 8TH

Morning

Exposition Grounds

11:30 A. M.

Presentation of Testimonial from Panama-Pacific Exposition Company, commemorative of the 1915 Meeting, by Exposition Officials.

Accountants' Association

MONDAY, OCTOBER 4TH

Morning

9:30 A. M. to 12:30 P. M.

Registration and distribution of badges at booth in Lobby, Native Sons of the Golden West Building.

Afternoon

Meeting held in Sacramento Hall

2:00 P. M. to 4:30 P. M.

Convention Called to Order.

Annual Address of the President.

Annual Report of Executive Committee.

Annual Report of Secretary-Treasurer.

Appointment of Convention Committees:

- (a) Resolutions.
- (b) Nominations.

Reports of Committees:

- (a) Standard Classification of Accounts.
 - (b) Accounting Definitions.
 - (c) Representing Association at Convention of Railway Commissioners.
 - (d) Education.
 - (e) Award of prize of \$50 in gold to the author of the best paper submitted on Eighth Lecture of the Accountants' Course.
 - (f) Express and Freight Accounting.
 - (g) Passenger Accounting.
 - (h) Joint Report, Passenger and Express and Freight Accounting.
- Address, "Taxation of Electric Railways," by Mr. Carl C. Plehn, Professor, University of California, Berkeley, Cal.

After First Meeting

Meeting held in Auditorium

4:30 P. M. to 5:00 P. M., Joint Session with Transportation and Traffic Association.

Report of Committee:

- (a) Transportation-Accounting.

TUESDAY, OCTOBER 5TH

Afternoon

Meeting held in Sacramento Hall

2:00 P. M. to 4:00 P. M.

Paper, "Electric Railway Accounting—A Review," by Mr. P. V. Burington, Secretary, The Columbus Railway, Power & Light Co., Columbus, Ohio.

Paper, "The Merits of Prepayment Cars, from the Viewpoint of the Accounting Department," by Mr. R. J. Clark, Comptroller, Metropolitan Street Railway Co., Kansas City, Mo.

Paper, "The Value of Statistics to Executive and Accounting Departments," by Mr. George B. Willcutt, Secretary, United Railroads of San Francisco, San Francisco, Cal.

WEDNESDAY, OCTOBER 6TH

Afternoon

Meeting held in Yosemite Hall

2:00 P. M. to 3:00 P. M., Joint Session with Engineering Association.

Reports of Committees:

- (a) Engineering-Accounting.
- (b) Life of Railway Physical Property.

After Joint Session

Meeting held in Sacramento Hall

3:00 P. M. to 5:00 P. M.

Changes in Constitution and By-Laws.

Address, "Treatment of Charges for Rent of Tracks and Facilities and Rent of Equipment," by Mr. Paul Shoup, President, Pacific Electric Railway Co., Los Angeles, Cal.

Paper, "The Importance of Accrued and Accruing Accounts from the Viewpoint of the Certified Public Accountant," by Mr. John F. Forbes, C. P. A., representing Messrs. Haskins & Sells, Certified Public Accountants, San Francisco, Cal.

Address, "Some Neglected Problems in Electric Railway Accounting," by Mr. Henry Rand Hatfield, Professor, University of California, Berkeley, Cal.

Reports of Convention Committees:

- (a) Resolutions.
- (b) Nominations.

Election of Officers.

Installation of Officers.

Adjournment.

FRIDAY, OCTOBER 8TH

Morning

Exposition Grounds

11:30 A. M.

Presentation of Testimonial from Panama-Pacific Exposition Company, Commemorative of the 1915 Meeting, by Exposition Officials.

Engineering Association

MONDAY, OCTOBER 4TH

Morning

9:30 A. M. to 12:30 P. M.

Registration and distribution of badges at booth in Lobby, Native Sons of the Golden West Building.

Afternoon

Meeting held in Yosemite Hall

2:00 P. M. to 5:00 P. M.

Convention Called to Order.

Annual Address of the President.

Annual Report of Executive Committee.

Annual Report of Secretary-Treasurer.

Appointment of Convention Committee:

- (a) Resolutions.

Reports of Committees:

- (a) Lightning Protection.
- (b) Standards.
- (c) Power Distribution.
- (d) Standards (on recommendations contained in above report).

TUESDAY, OCTOBER 5TH

Afternoon

Meeting held in Auditorium

2:00 P. M. to 3:00 P. M., Joint Session with Transportation and Traffic Association.

Reports of Committees:

- (a) Block Signals for Electric Railways.
- (b) Standards (on recommendations contained in above report).
- (c) Joint Sub-committee on Block Signal Rules.
- (d) Transportation-Engineering.

After Joint Session

Meeting held in Yosemite Hall

3:00 P. M. to 5:00 P. M.

Reports of Committees:

- (a) Equipment.
- (b) Standards (on recommendations contained in above report).
- (c) Buildings and Structures.
- (d) Standards (on recommendations contained in above report).

WEDNESDAY, OCTOBER 6TH

Afternoon

Meeting held in Yosemite Hall

2:00 P. M. to 3:00 P. M., Joint Session with Accountants' Association.

Reports of Committees:

- (a) Engineering-Accounting.
- (b) Life of Railway Physical Property.

After Joint Session

Meeting held in Yosemite Hall

3:00 P. M. to 5:00 P. M.

Reports of Committees:

- (a) Constitution and By-Laws.
- (b) Power Generation.
- (c) Standards (on recommendations contained in above report).

THURSDAY, OCTOBER 7TH

Afternoon

Meeting held in Yosemite Hall

2:00 P. M. to 5:00 P. M.

Reports of Committees:

- (a) Way Matters.
 - (b) Standards (on recommendations contained in above report).
- Address, "Some Factors Affecting the Application of Wood Preservation to Electric Railways," by Messrs. Carlile P. Winslow and Clyde H. Teesdale, Forest Products Laboratory, Madison, Wis.
- Reports of Committees (Continued):
- (c) Heavy Electric Traction.
 - (d) Standards (on recommendations contained in above report).
 - (e) Electrolysis.

General Business.

Report of Committee on Resolutions.

Report of Committee on Nominations.

Election of Officers.

Installation of Officers.

Adjournment.

FRIDAY, OCTOBER 8TH

Morning

Exposition Grounds

11:30 A. M.

Presentation of Testimonial from Panama-Pacific Exposition Company, Commemorative of the 1915 Meeting, by Exposition Officials.

Claims Association**MONDAY, OCTOBER 4TH****Morning**

9:30 A. M. to 12:30 P. M.

Registration and distribution of badges at booth in Lobby, Native Sons of the Golden West Building.

Afternoon

Meeting held in San Joaquin Hall

2:00 P. M. to 5:00 P. M.

Convention Called to Order.

Annual Address of the President.

Annual Report of Executive Committee.

Annual Report of Secretary-Treasurer.

Appointment of Convention Committees:

(a) Resolutions.

(b) Nominations.

Reports of Committees:

(a) Accident Prevention Board.

(b) Employment.

(c) Ways and Means.

Paper, "The Prevention of Motor-Vehicle Accidents," by Mr. S. B. Hare, Claim Agent, Altoona & Logan Valley Electric Railway Co., Altoona, Pa.

Written Discussion.

TUESDAY, OCTOBER 5TH**Afternoon**

Meeting held in San Joaquin Hall

2:00 P. M. to 4:00 P. M.

Paper, "Standardization of Claims Statistics," by Mr. E. E. Slick, Claim Adjuster, Union Traction Company of Indiana, Anderson, Ind.

Written Discussion.

WEDNESDAY, OCTOBER 6TH**Afternoon**

Meeting held in Auditorium

2:00 P. M. to 3:00 P. M., Joint Session with Transportation and Traffic Association.

Report of Committee:

(a) Claims-Transportation.

After Joint Session

Meeting held in San Joaquin Hall

3:00 P. M. to 5:00 P. M.

Changes in Constitution and By-Laws.

Paper, "A Card Index and What It Means," by Mr. J. J. Reynolds, Claims Attorney, Boston Elevated Railway Co., Boston, Mass.

Written Discussion.

THURSDAY, OCTOBER 7TH

Afternoon

Meeting held in San Joaquin Hall

2:00 P. M. to 5:00 P. M.

Paper, "Safety and Its Relation to Conservation," by Mr. B. F. Boynton, Claim Agent, Portland Railway, Light & Power Co., Portland, Ore.

Written Discussion:

- (a) "Financial Benefits Resulting from the Safety First Movement," by Mr. J. S. Harrison, Claim Agent, Jacksonville Traction Co., Jacksonville, Fla.
- (b) "Justification of the Safety First Movement from a Humanitarian Standpoint," by Mr. Alves Dixon, Claim Agent, El Paso Electric Railway Co., El Paso, Tex.
- (c) "Uses and Benefits of Illustrated Lectures," by Mr. H. K. Bennett, Claim Agent, Fitchburg & Leominster Street Railway Co., Fitchburg, Mass.
- (d) "Should a Moving Picture Film Exchange be Established by the A. E. R. A.," by Mr. F. J. Warnock, Chief Claim Agent, Mahoning & Shenango Railway and Light Co., Youngstown, Ohio.

General Business.

Reports of Convention Committees:

(a) Resolutions.

(b) Nominations.

Election of Officers.

Installation of Officers.

Adjournment.

FRIDAY, OCTOBER 8TH

Morning

Exposition Grounds

11:30 A. M.

Presentation of Testimonial from Panama-Pacific Exposition Company, Commemorative of the 1915 Meeting, by Exposition Officials.

Transportation and Traffic Association

MONDAY, OCTOBER 4TH

Morning

9:30 A. M. to 12:30 P. M.

Registration and distribution of badges at booth in Lobby, Native Sons of the Golden West Building.

Afternoon

Meeting held in Auditorium

2:00 P. M. to 4:30 P. M.

Convention Called to Order.

Annual Address of the President.

Annual Report of Executive Committee.

Annual Report of Secretary-Treasurer.

Appointment of Convention Committees:

(a) Resolutions.

(b) Nominations.

Reports of Committees:

- (a) Rules.
- (b) Construction of Schedules and Time-tables.
- (c) Definitions.

TUESDAY, OCTOBER 5TH**Afternoon**

Meeting held in Auditorium

2:00 P. M. to 3:00 P. M., Joint Meeting with Engineering Association.

Reports of Committees:

- (a) Block Signals for Electric Railways.
- (b) Standards (on recommendations contained in above report).
- (c) Joint Sub-committee on Block Signal Rules.
- (d) Transportation-Engineering.

After Joint Session

Meeting held in Auditorium

3:00 P. M. to 5:00 P. M.

Address, "Relation of Electric Railways to Agriculture," by Mr. Paul Shoup, President, Pacific Electric Railway Co., Los Angeles, Cal.

Report of Committee:

- (a) Standards.

WEDNESDAY, OCTOBER 6TH**Afternoon**

Meeting held in Auditorium

2:00 P. M. to 3:00 P. M., Joint Session with Claims Association.

Report of Committee:

- (a) Claims-Transportation.

After Joint Session

Meeting held in Auditorium

3:00 P. M. to 5:00 P. M.

Changes in Constitution and By-Laws.

Reports of Committees:

- (a) Freight and Express Traffic.
- (b) Passenger Traffic.

THURSDAY, OCTOBER 7TH**Afternoon**

Meeting held in Auditorium

2:00 P. M. to 5:00 P. M.

Reports of Committees:

- (a) Fares and Transfers.
 - (b) Training of Transportation Employees.
- General Business.

Reports of Convention Committees:

- (a) Resolutions.
- (b) Nominations.
- Election of Officers.
- Installation of Officers.
- Adjournment.

FRIDAY, OCTOBER 8TH

Morning

Exposition Grounds

11:30 A. M.

Presentation of Testimonial from Panama-Pacific Exposition Company, Commemorative of the 1915 Meeting, by Exposition Officials.

Manufacturers' Association

Executive Committee Meetings:

American Electric Railway Manufacturers' Association. Yosemite Hall, Native Sons of the Golden West Building, 414 Mason Street, San Francisco, Cal., Tuesday, October 5th, and Thursday, October 7th, at 12:00 o'clock noon.

Annual Meeting:

Of the American Electric Railway Manufacturers' Association, Yosemite Hall, Native Sons of the Golden West Building, 414 Mason Street, San Francisco, Cal., Wednesday, October 6th, at 12:00 o'clock noon.

DISTRIBUTION OF ADVANCE PAPERS

To promote intelligent discussion, to conserve the time and to add value to the proceedings of the various conventions, it is the practice to print and distribute to company and individual members, copies of all reports and papers upon which it is desirable to have a full discussion.

Members are urged to familiarize themselves with these reports and papers, in order that they may present such objections, amendments, or additions as seem to them desirable and in order that the vote on the adoption of reports may be made with a full understanding of the subject.

American Association

- No. 101.— Report of the Committee on Changes in Constitution and By-Laws.
- No. 102.— Report of the Committee on Dues of Members of Company Sections.
- No. 103.— Report of the Committee on Compensation for Carrying United States Mail.
- No. 104.—Address of Hon. Jonathan Bourne, Jr., "Evils of Government Ownership."
- No. 107.—Address of B. J. Arnold, "Foundation Principle of Utility Valuation With Special Application to Resettlement Plans."
- No. 109.— Report of the Committee on Education.

Accountants' Association

- No. 201.— Proposed Amendments to Constitution and By-Laws.
- No. 203.— Report of Committee on Passenger Accounting.
- No. 207.— Report of Committee on Express and Freight Accounting.

Engineering Association

- No. 300.— Report of the Committee on Nominations.
- No. 301A.— Changes in Constitution.
- No. 301B.— Proposed Amendments to Constitution and By-Laws.
- No. 302.— Paper by Carlile P. Winslow and Clyde H. Teesdale, "Some Factors Affecting the Application of Wood Preservation to Electric Railways."
- No. 303.— Report of the Committee on Lightning Protection.
- No. 304.— Report of the Committee on Power Distribution.
- No. 305.— Report of the Committee on Heavy Electric Traction.
- No. 308.— Report of the Committee on Power Generation.
- No. 309.— Report of the Committee on Buildings and Structures.
- No. 310.— Report of the Committee on Way Matters.
- No. 311.— Report of the Committee on Equipment.
- No. 312.— Report of the Committee on Electrolysis.
- No. 313.— Report of the Committee on Standards.

Claims Association

- No. 401.— Proposed Amendments to Constitution and By-Laws.
- No. 402.— Papers and Written Discussions.

Transportation and Traffic Association

- No. 500.— Proposed Amendments to Constitution and By-Laws.
- No. 501.— Report of the Committee on Training of Transportation Employees.
- No. 502.— Report of the Committee on Rules.
- No. 504.— Report of the Committee on Standards.
- No. 506.— Report of the Committee on Passenger Traffic.
- No. 509.— Report of the Committee on Express and Freight Traffic.
- No. 511.— Report of the Committee on Fares and Transfers.
- No. 513.— Report of the Committee on Construction of Schedules and Time-Tables.

Joint Committees

- No. 206-307.— Report of the Joint Committee on Engineering Accounting.
- No. 306-507.— Report of the Joint Committee on Block Signals for Electric Railways.
- No. 405-505.— Report of the Joint Committee on Claims Transportation.

THE MANUFACTURERS' EXHIBITION

The exhibition of electric railway apparatus and supplies held in connection with the Convention is one of its most attractive features. In the early history of the American Street Railway Association, manufacturers were accustomed to show samples of their goods adjacent to the meeting hall in such places as could be secured.

The First Large Exhibit came in 1893. The Convention of this year was held in Milwaukee and the Milwaukee Exposition Hall was secured and a larger exhibition was given

Exhibits Under Association's Direction were held from 1893 until 1903, inclusive. In 1903, a committee of twenty-five manufacturers was formed at the Convention held in Saratoga, and at a meeting of the American Electric Railway Association held in February, 1904, was authorized to conduct future exhibitions and provide and have charge of the entertainment at Conventions. Upon the organization of the Manufacturers' Association, that organization assumed these functions.

Because the 1904 Convention was held at St. Louis in connection with the Louisiana Purchase Exposition, no exhibit was held in that year. The 1915 Convention was held in San Francisco, in connection with the Panama-Pacific Exposition and at the Convention the exhibit was also omitted. They will however be resumed with the 1916 Convention.

As illustrative of the extent of these exhibits it may be said that at the 1914 Convention there were 173 exhibitors, occupying nearly 70,000 square feet of floor space.

ENTERTAINMENT FEATURES AT CONVENTIONS

The aim of the Entertainment Committee at the Association's Convention is to provide a program, which while giving a proper amount of recreation does not interfere with the work of the Associations. This has been very successfully done. Because of the Panama-Pacific Exposition, the formal entertainment at the 1915 Convention was confined to a reception for the officers of the various Associations held at the St. Francis Hotel on Monday evening, October 4th. In addition, the local companies provided a variety of sight-seeing trips.

REGISTRATION AT CONVENTIONS

The registration of delegates at the Conventions is conducted, for the American and its affiliated associations, under the direction of the Secretary of the American Association, and for representatives of the Manufacturers' Association by the Secretary of the Manufacturers' Association.

Advance Registration blanks are sent out previous to each Convention, to each member company, to be filled out

and returned. These blanks are filled in to give the names of the representatives of the company who will attend the Convention. These names are listed, a card system prepared, and upon arrival at the Convention hall the delegate is immediately given his badge which entitles him to all the privileges of a delegate.

Those delegates who do not register in advance hand in the same information at the registration booth and are given their badges. On account of the necessary delay, caused by this method, company members are urged to register all their delegates in advance.

Representatives of manufacturing concerns registering at conventions automatically become members of the Railway Association and upon the payment of the \$5 registration fee may affiliate with such organization as they desire.

In advance of each Convention, receipt cards showing the payment of dues for the current year are forwarded to all manufacturers or their representatives, who are individual members of the Railway Associations, and these cards may be exchanged for badges without the payment of any fee.

Guests' badges are issued to public officials, representatives of other Associations, and especially invited guests of the Association.

Ladies' badges are issued to ladies accompanying delegates.

APPENDIX

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OFFICERS OF THE AMERICAN ELECTRIC RAILWAY ASSOCIATION AND ITS PREDECESSORS AND OF ITS PRESENT AFFILIATED AND ALLIED ASSOCIATIONS AND THEIR PREDECESSORS SINCE THE ORGANIZATION OF EACH, CHRONOLOGICALLY ARRANGED

Officers of the Organization Meeting, held in Boston, Mass., Dec. 12th and 13th, 1882.

CHAIRMAN — *MOODY MERRILL, President, Highland Street Railway Co., Boston, Mass.

SECRETARIES — CHAUNCEY C. WOODWORTH, Secretary, Rochester City & Brighton Railroad Co., Rochester, N. Y., and CHARLES B. CLEGG, President, Oakwood & Dayton Street Railway Co., Dayton, O.

1882-1883

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Boston, Dec. 13, 1882.)

PRESIDENT — H. H. LITTELL, General Manager, Louisville City Railway Co., Louisville, Ky.

FIRST VICE-PRESIDENT — *WILLIAM H. HAZZARD, President, Brooklyn City Railroad Co., Brooklyn, N. Y.

SECOND VICE-PRESIDENT — *CALVIN A. RICHARDS, President, Metropolitan Railroad Co., Boston, Mass.

THIRD VICE-PRESIDENT — *GEORGE B. KERPER, President, Mount Adams & Eden Park Inclined Railroad, Cincinnati, O.

SECRETARY AND TREASURER — *WILLIAM J. RICHARDSON, Secretary, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE — President, Vice-Presidents and JULIUS S. WALSH, President, Citizens Railway Co., St. Louis, Mo.; CHARLES CLEMINSHAW, Vice-President, Troy and Lansingburgh Railroad Co., Troy, N. Y.; *THOMAS LOWRY, President, Minneapolis Street Railway Co., Minneapolis, Minn.; JAMES K. LAKE, Superintendent, Chicago West Division Railway, Chicago, Ill.; DANIEL F. LONGSTREET, General Manager, Union Railroad Co., Providence, R. I.

1883-1884

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Chicago, Oct. 10, 1883.)

PRESIDENT — *WILLIAM H. HAZZARD, President, Brooklyn City Railroad Co., Brooklyn, N. Y.

FIRST VICE-PRESIDENT — JAMES K. LAKE, Superintendent, Chicago West Division Railway, Chicago, Ill.

SECOND VICE-PRESIDENT — *GEORGE B. KERPER, President, Mount Adams & Eden Park Inclined Railway, Cincinnati, O.

THIRD VICE-PRESIDENT — DANIEL F. LONGSTREET, General Manager, Union Railroad Co., Providence, R. I.

* Deceased.

SECRETARY and TREASURER—*WILLIAM J. RICHARDSON, Secretary, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and H. H. LITTELL, General Manager, Louisville City Railway Co., Louisville, Ky.; *JOHN G. HOLMES, President, Citizens' Street Railroad Co., Pittsburg, Pa.; JULIUS E. RUGG, Superintendent, Highland Street Railroad, Boston, Mass.; PIERRE C. MAFFITT, President, Missouri Railroad Co., St. Louis, Mo.; *JACOB SHARP, President, Twenty-third Street Railway Co., New York, N. Y.

1884-1885

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at New York, Oct. 17, 1884.)

PRESIDENT—*CALVIN A. RICHARDS, President, Metropolitan Railroad Co., Boston, Mass.

FIRST VICE-PRESIDENT—JULIUS S. WALSH, President, Citizens' Railway Co., St. Louis, Mo.

SECOND VICE-PRESIDENT—*HENRY M. WATSON, President, Buffalo Street Railroad Co., Buffalo, N. Y.

THIRD VICE-PRESIDENT—EDWARD LUSHER, Secretary and Treasurer, Montreal City Passenger Railway Co., Montreal, Quebec.

SECRETARY AND TREASURER—*WILLIAM J. RICHARDSON, Secretary, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and *WILLIAM H. HAZZARD, President, Brooklyn City Railroad Co., Brooklyn, N. Y.; JAMES K. LAKE, Superintendent, Chicago West Division Railway, Chicago, Ill.; *CHARLES J. HARRAH, President, People's Passenger Railway Co., Philadelphia, Pa.; *WILLIAM WHITE, President, Dry Dock, E. Broadway & Battery Railroad Co., New York, N. Y.; B. DU PONT, President, Central Passenger Railroad Co., Louisville, Ky.

1885-1886

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at St. Louis, Oct. 23, 1885.)

PRESIDENT—JULIUS S. WALSH, President, Citizens' Railway Co., St. Louis, Mo.

FIRST VICE-PRESIDENT—*WILLIAM WHITE, President, Dry Dock, E. Broadway & Battery Railroad Co., New York, N. Y.

SECOND VICE-PRESIDENT—CHARLES B. HOLMES, President, Chicago City Railway Co., Chicago, Ill.

THIRD VICE-PRESIDENT—*SAMUEL LITTLE, Treasurer, Highland Street Railway Co., Boston, Mass.

SECRETARY AND TREASURER—*WILLIAM J. RICHARDSON, Secretary, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and *CALVIN A. RICHARDS, President, Metropolitan Railroad Co., Boston, Mass.; *JOHN KILGOUR, President, Cincinnati Street Railway Co., Cincinnati, O.; JOHN MAGUIRE, President, City Railroad Co., Mobile, Ala.; *THOMAS W. ACKLEY, President, 13th and 15th Streets Passenger Railway Co., Philadelphia, Pa.; CHAUNCEY C. WOODWORTH, Secretary, Rochester City & Battery Railroad Co., Rochester, N. Y.

* Deceased.

1886—1887

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Cincinnati, Oct. 21, 1886.)

PRESIDENT—* **THOMAS W. ACKLEY**, President, 13th and 15th Street Passenger Railway Co., Philadelphia, Pa.

FIRST VICE-PRESIDENT—**ALBERT G. CLARK**, Vice-President, Cincinnati Street Railway Co., Cincinnati, O.

SECOND VICE-PRESIDENT—* **WILLIAM H. SINCLAIR**, President, Galveston City Railroad Co., Galveston, Tex.

THIRD VICE-PRESIDENT—**PRENTISS CUMMINGS**, President, Cambridge Railroad Co., Cambridge, Mass.

SECRETARY AND TREASURER—* **WILLIAM J. RICHARDSON**, Secretary, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and **JULIUS S. WALSH**, President, Citizens' Railway Co., St. Louis, Mo.;

HENRY HURT, President, Washington & Georgetown Railroad Co., Washington, D. C.; * **C. DENSMORE WYMAN**, Vice-President, Central

Park, North and East River Railroad Co., New York; * **A. EVERETT**, President, East Cleveland Railroad Co., Cleveland, Ohio; **SAMUEL S.**

SPAULDING, President, East Side Street Railroad Co., Buffalo, N. Y.

1887—1888

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Philadelphia, Oct. 20, 1887.)

PRESIDENT—**CHARLES B. HOLMES**, President, Chicago City Railway Co., Chicago, Ill.

FIRST VICE-PRESIDENT—**JULIUS E. RUGG**, General Superintendent, Boston Consolidated Street Railway, Boston, Mass.

SECOND VICE-PRESIDENT—* **R. DUDLEY FRAYSER**, President, Memphis City Railway Co., Memphis, Tenn.

THIRD VICE-PRESIDENT—**CHARLES B. CLEGG**, Director, Dayton Street Railroad Co., Dayton, O.

SECRETARY AND TREASURER—* **WILLIAM J. RICHARDSON**, Secretary, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and * **THOMAS W. ACKLEY**, President, 13th and 15th Streets Passenger

Railway Co., Philadelphia, Pa.; * **WINFIELD SMITH**, President, Cream City Railroad Co., Milwaukee, Wis.; **DANIEL F. LEWIS**, President,

Brooklyn City Railroad Co., Brooklyn, N. Y.; * **CHARLES GREEN**, President, People's Railway Co., St. Louis, Mo.; **EDWARD G. MOSHER**,

Superintendent, Augusta & Summerville Railroad, Augusta, Ga.

1888—1889

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Washington, Oct. 18, 1888.)

PRESIDENT—* **GEORGE B. KERPER**, President, Mount Adams & Eden Park Inclined Railway, Cincinnati, O.

FIRST VICE-PRESIDENT—**JESSE METCALF**, President, Union Railroad Co., Providence, R. I.

SECOND VICE-PRESIDENT—**HENRY HURT**, President, Washington & Georgetown Railroad Co., Washington, D. C.

THIRD VICE-PRESIDENT—**WILLIAM H. MARTIN**, Vice-President, Ferries & Cliff House Railway Co., San Francisco, Cal.

* Deceased.

SECRETARY AND TREASURER—* **WILLIAM J. RICHARDSON**, Secretary, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and **CHARLES B. HOLMES**, President, Chicago City Railway Co., Chicago, Ill.; **JOHN SCULLIN**, President, Union Depot Railroad Co., St. Louis, Mo.; **JAMES H. JOHNSTON**, President, City & Suburban Railway Co., Savannah, Ga.; **HENRY A. SAGE**, President, Easton, S. Easton & W. E. Passenger Railway Co., Easton, Pa.; **EDWARD J. LAWLESS**, Superintendent, Metropolitan Street Railway, Kansas City, Mo.

1889-1890

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Minneapolis, Oct. 17, 1889.)

PRESIDENT—* **THOMAS LOWRY**, President, Minneapolis & St. Paul Street Railway Cos., Minneapolis, Minn.

FIRST VICE-PRESIDENT—* **C. DENSMORE WYMAN**, Vice-President, Central Park, North & East River Railroad Co., New York, N. Y.

SECOND VICE-PRESIDENT—**JOHN C. SHAFFER**, President, Citizens' Street Railroad Co., Indianapolis, Ind.

THIRD VICE-PRESIDENT—* **ROBERT McCULLOCH**, General Manager, Citizens', St. Louis, Cass Avenue & Fair Grounds, and Benton-Bellefontaine Railways, St. Louis, Mo.

SECRETARY AND TREASURER—* **WILLIAM J. RICHARDSON**, Secretary, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and ***GEORGE B. KERPER**, President, Mt. Adams & E. P. Inc. Railway Co., Cincinnati, O.; **GEORGE W. KIELEY**, Managing Director, Toronto Street Railway Co., Toronto, Ontario; **FRANK H. MONKS**, General Manager, West End Street Railway Co., Boston, Mass.; **RAPHAEL SEMMES**, Superintendent, Citizens' Street Railroad, Memphis, Tenn.; **FRANCIS M. EPPLEY**, President, Orange Cross-Town & B. Railway Co., Orange, N. J.

1890-1891

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Buffalo, Oct. 16, 1890.)

PRESIDENT—* **HENRY M. WATSON**, President, Buffalo Street Railroad and Buffalo East Side Street Railway Cos., Buffalo, N. Y.

FIRST VICE-PRESIDENT—**WILLIAM A. SMITH**, General Manager, Omaha Street Railway Co., Omaha, Neb.

SECOND VICE-PRESIDENT—**CHARLES ODELL**, President, Newburyport & Amesbury Street Railroad Co., Newburyport, Mass.

THIRD VICE-PRESIDENT—**ANDREW D. RODGERS**, President, Columbus Consolidated Street Railroad Co., Columbus, O.

SECRETARY AND TREASURER—* **WILLIAM J. RICHARDSON**, Secretary, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and ***THOMAS LOWRY**, President, Minneapolis and St. Paul Street Railway Cos., Minneapolis, Minn.; **DAVID F. HENRY**, President, Federal Street & P. V. Pass. Railway Co., Pittsburg, Pa.; **ALBERT E. THORNTON**, Director, Atlanta Street Railroad Co., Atlanta, Ga.; **HARVEY M. LITTELL**, General Manager, Cincinnati Inclined Plane Railway Co., Cincinnati, O.; **THOMAS C. KEEFER**, President, Ottawa City Pass. Railway Co., Ottawa, Ontario.

* Deceased.

1891—1892

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Pittsburg, Oct. 22, 1891.)

PRESIDENT—* JOHN G. HOLMES, President, Citizens' Traction Co., Pittsburg, Pa.

FIRST VICE-PRESIDENT—* THOMAS H. McLEAN, Secretary, Twenty-third Street Railway Co., New York, N. Y.

SECOND VICE-PRESIDENT—JAMES B. SPEED, President, Louisville City Railway Co., Louisville, Ky.

THIRD VICE-PRESIDENT—ALBION E. LANG, Vice-President, Toledo Consolidated Street Railway Co., Toledo, O.

SECRETARY AND TREASURER—* WILLIAM J. RICHARDSON, Secretary, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and * HENRY M. WATSON, President, Buffalo Railway Co., Buffalo, N. Y.; LEWIS PERRINE, JR., President, Trenton Passenger Railway Co., Consolidated, Trenton, N. J.; W. WORTH BEAN, President, St. Joseph & Benton Harbor Railway Co., St. Joseph, Mich.; MURRY A. VERNER, President, Pittsburg & Birmingham Traction Co., Pittsburg, Pa.; THOMAS C. PENNINGTON, Treasurer, Chicago City Railway Co., Chicago, Ill.

1892—1893

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Cleveland, Oct. 20, 1892.)

PRESIDENT—D. F. LONGSTREET, Vice-President and General Manager, West End Street Railroad Co., Denver, Col.

FIRST VICE-PRESIDENT—* A. EVERETT, President, East Cleveland Railroad Co., Cleveland, O.

SECOND VICE-PRESIDENT—JOEL HURT, President, Atlanta Consolidated Street Railroad Co., Atlanta, Ga.

THIRD VICE-PRESIDENT—W. WORTH BEAN, President, St. Joseph & Benton Harbor Electric Railway Co., St. Joseph, Mich.

SECRETARY AND TREASURER—* WILLIAM J. RICHARDSON, Secretary and Treasurer, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and * JOHN G. HOLMES, President, Citizens' Traction Co., Pittsburg, Pa.; JOHN D. CRIMMINS, President, Metropolitan Traction Co., New York, N. Y.; THOMAS J. MINARY, General Manager, Louisville Railway Co., Louisville, Ky.; JAMES R. CHAPMAN, Vice-President, Consolidated Street Railway Co., Grand Rapids, Mich.; BENJAMIN E. CHARLTON, President, Hamilton Street Railway Co., Hamilton, Ont.

1893—1894

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Milwaukee, Oct. 19, 1893.)

PRESIDENT—HENRY C. PAYNE, Vice-President, Milwaukee Street Railway Co., Milwaukee, Wis.

FIRST VICE-PRESIDENT—* WILLIAM J. STEPHENSON, President, Metropolitan Railroad Co., Washington, D. C.

SECOND VICE-PRESIDENT—JAMES R. CHAPMAN, Vice-President, Consolidated Street Railway Co., Grand Rapids, Mich.

THIRD VICE-PRESIDENT—LEWIS PERRINE, JR., President, Trenton Passenger Railway Co., Consolidated, Trenton, N. J.

* Deceased.

SECRETARY AND TREASURER—* **WILLIAM J. RICHARDSON**, Secretary and Treasurer, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and **D. F. LONGSTREET**, Vice-President, West End Street Railway Co., Denver, Col.; * **THOMAS H. McLEAN**, General Manager, Citizens' Street Railroad Co., Indianapolis, Ind.; **EDWARDS WHITAKER**, President, Lindell Railway Co., St. Louis, Mo.; **W. Y. SOPER**, President, Ottawa Electric Street Railway Co., Ottawa, Ontario; **E. S. GOODRICH**, President, Hartford Street Railway Co., Hartford, Conn.

1894-1895

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Atlanta, Oct. 19, 1894.)

PRESIDENT—**JOEL HURT**, President, Atlanta Consolidated Street Railway Co., Atlanta, Ga.

FIRST VICE-PRESIDENT—**W. WORTH BEAN**, President, St. Joseph & Benton Harbor Electric Railway & Light Co., St. Joseph, Mich.

SECOND VICE-PRESIDENT—**JOHN H. CUNNINGHAM**, Director, Lynn & Boston Railroad Co., Boston, Mass.

THIRD VICE-PRESIDENT—**RUSSELL B. HARRISON**, President, Terre Haute Street Railway Co., Terre Haute, Ind.

SECRETARY AND TREASURER—* **WILLIAM J. RICHARDSON**, Director, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and * **HENRY C. PAYNE**, Vice-President, Milwaukee Street Railway Co., Milwaukee, Wis.; * **WILLIAM H. JACKSON**, President, Nashville Street Railway, Nashville, Tenn.; * **D. G. HAMILTON**, President, Cass Avenue & Fair Grounds Railway Co. and St. Louis' Railroad Co., St. Louis, Mo.; **GRANVILLE C. CUNNINGHAM**, Manager, Montreal Street Railway Co., Montreal, Quebec; **JOHN N. PARTRIDGE**, President, Brooklyn City & Newtown Railroad Co., Brooklyn, N. Y.

1895-1896

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Montreal, Oct. 18, 1895.)

PRESIDENT—**H. M. LITTELL**, President, Atlantic Avenue Railroad Co., Brooklyn, N. Y.

FIRST VICE-PRESIDENT—**GRANVILLE C. CUNNINGHAM**, Manager, Montreal Street Railway Co., Montreal, Quebec.

SECOND VICE-PRESIDENT—* **WILLIAM H. JACKSON**, President, Nashville Street Railway, Nashville, Tenn.

THIRD VICE-PRESIDENT—**J. WILLARD MORGAN**, President, Camden, Gloucester & Woodbury Railroad Co., Camden, N. J.

SECRETARY AND TREASURER—**T. C. PENINGTON**, Treasurer, Chicago City Railway Co., Chicago, Ill.

EXECUTIVE COMMITTEE—President, Vice-Presidents and **JOEL HURT**, President, Atlanta Consolidated Street Railway Co., Atlanta, Ga.; **PRENTISS CUMMINGS**, Vice-President, West End Street Railway Co., Boston, Mass.; * **C. G. GOODRICH**, Vice-President, Twin City Railway Co., St. Paul, Minn.; **A. MARKLE**, General Manager, Lehigh Traction Co., Hazleton, Pa.; **W. F. KELLY**, General Manager, Columbus Street Railway Co., Columbus, O.

* Deceased.

1896-1897

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at St. Louis, Oct. 23, 1896.)

PRESIDENT — * ROBERT McCULLOCH, Vice-President and General Manager, Citizens', Cass Avenue & St. Louis Railroad Cos., St. Louis, Mo.

FIRST VICE-PRESIDENT — CHARLES S. SERGEANT, General Manager, West End Street Railway Co., Boston, Mass.

SECOND VICE-PRESIDENT — D. B. DYER, President, Augusta Railway & Electric Co., Augusta, Ga.

THIRD VICE-PRESIDENT — C. F. HOLMES, General Manager, Metropolitan Street Railway Co., Kansas City, Mo.

SECRETARY AND TREASURER — T. C. PENINGTON, Treasurer, Chicago City Railway Co., Chicago, Ill.

EXECUTIVE COMMITTEE — President, Vice-Presidents and H. M. LITTELL, Vice-President and General Manager, Metropolitan Street Railway Co., New York City, N. Y.; H. P. BRADFORD, General Manager, Cincinnati Inclined Plane Railway Co., Cincinnati, O.; CHARLES H. SMITH, General Superintendent, Troy City Railway Co., Troy, N. Y.; HARRY SCULLIN, Vice-President and General Manager, Union Depot Railroad Co., St. Louis, Mo.; GEORGE B. HIPPEE, General Manager, Des Moines City Railway Co., Des Moines, Iowa.

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1897

STREET RAILWAY ACCOUNTANTS ASSOCIATION OF AMERICA

(Officers of Organization Meeting Held in Cleveland, Ohio, March 23, 24, 1897.)

CHAIRMAN — * M. W. HALL, Secretary, Camden & Suburban Railway Co., Camden, N. J.

SECRETARY — W. B. BROCKWAY, Auditor, Toledo, Bowling Green & Fremont Railway Co., Toledo, Ohio.

(Elected at Cleveland, March 24, 1897.)

PRESIDENT — H. L. WILSON, Auditor, West End Street Railway Co., Boston, Mass.

FIRST VICE-PRESIDENT — C. N. DUFFY, Secretary, Citizens Railway Co., St. Louis Mo.

SECOND VICE-PRESIDENT — J. F. CALDERWOOD, Auditor, Twin City Rapid Transit Co., Minneapolis, Minn.

THIRD VICE-PRESIDENT — * C. B. REAVIS, Secretary and Auditor, Augusta Railway & Electric Co., Augusta, Ga.

SECRETARY AND TREASURER — W. B. BROCKWAY, Auditor, Toledo, Bowling Green & Fremont Railway Co., Toledo, Ohio.

EXECUTIVE COMMITTEE — The Officers and DANA STEVENS, Accountant Belt Railway Co., Washington, D. C.; W. S. DIMMOCK, General Superintendent, Omaha & Council Bluffs Railway & Bridge Co., Council Bluffs, Iowa; W. G. ROSS, Comptroller, Montreal Street Railway Co., Montreal, Quebec; * E. R. L. TIGHE, Accountant, Brooklyn, Queens County and Suburban Railway Co., Brooklyn, N. Y.

* Deceased.

1897-1898

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Niagara Falls, Oct. 22, 1897.)

PRESIDENT—ALBION E. LANG, President, Toledo Traction Co., Toledo, Ohio.**FIRST VICE-PRESIDENT**—W. CARYL ELY, President, Buffalo & Niagara Falls Electric Railway Co., Niagara Falls, N. Y.**SECOND VICE-PRESIDENT**—JOHN A. RIGG, President, United Traction Co., Reading, Pa.**THIRD VICE-PRESIDENT**—EDWARD G. CONNETTE, General Manager, Nashville Street Railway, Nashville, Tenn.**SECRETARY AND TREASURER**—T. C. PENINGTON, Treasurer, Chicago City Railway Co., Chicago, Ill.**EXECUTIVE COMMITTEE**—President, Vice-Presidents and * ROBERT McCULLOCH, Vice-President and General Manager, Citizens' Cass Avenue and St. Louis Railroad Cos., St. Louis, Mo.; * C. DENSMORE WYMAN, General Manager, New Orleans Traction Co., Limited, New Orleans, La.; HENRY C. MOORE, President, Trenton Street Railway Co., Trenton, N. J.; JOHN M. ROACH, Vice-President and General Manager, North Chicago Street Railroad Co., Chicago, Ill.; ROBERT S. GOFF, President and General Manager, Globe Street Railway Co., Fall River, Mass.**STREET RAILWAY ACCOUNTANTS ASSOCIATION OF AMERICA**

(Elected at Niagara Falls, Oct. 22, 1897.)

PRESIDENT—H. L. WILSON, Auditor, West End Street Railway Co., Boston, Mass.**FIRST VICE-PRESIDENT**—* E. D. HIBBS, Auditor, Consolidated Traction Co., Jersey City, N. J.**SECOND VICE-PRESIDENT**—P. V. BURINGTON, Secretary and Auditor, Columbus Street Railway Co., Columbus, Ohio.**THIRD VICE-PRESIDENT**—A. H. FORD, Secretary, New Orleans Traction Co., Limited, New Orleans, La.**SECRETARY AND TREASURER**—W. B. BROCKWAY, Auditor, Toledo, Bowling Green & Fremont Railway Co., Toledo, Ohio.**EXECUTIVE COMMITTEE**—The Officers and W. F. HAM, Secretary, Nassau Electric Railroad Co., Brooklyn, N. Y.; H. J. DAVIES, Assistant Secretary, Cleveland Electric Railway Co., Cleveland, Ohio; F. R. GREENE, Secretary, Chicago City Railway Co., Chicago, Ill.; J. M. SMITH, Comptroller, Toronto Railway Co., Toronto, Ontario.

1898-1899

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Boston, Sept. 9, 1898.)

PRESIDENT—CHARLES S. SERGEANT, Second Vice-President, Boston Elevated Railway Co., Boston, Mass.**FIRST VICE-PRESIDENT**—HENRY C. MOORE, President, Trenton Street Railway Co., Trenton, N. J.**SECOND VICE-PRESIDENT**—ERNEST WOODRUFF, President, Atlanta Consolidated Street Railway Co., Atlanta, Ga.**THIRD VICE-PRESIDENT**—WALTON H. HOLMES, Vice-President and General Manager, Metropolitan Street Railway Co., Kansas City, Mo.

* Deceased.

SECRETARY AND TREASURER—T. C. PENINGTON, Treasurer, Chicago City Railway Co., Chicago, Ill.

EXECUTIVE COMMITTEE—President, Vice-Presidents and ALBION E. LANG, President, Toledo Traction Co., Toledo, Ohio; GEORGE A. YUILLE, Second Vice-President, West Chicago Street Railroad Co., Chicago, Ill.; FRANK G. JONES, Vice-President, Memphis Street Railway Co., Memphis, Tenn.; JOHN I. BEGGS, General Manager, The Milwaukee Electric Railway and Light Co., Milwaukee, Wis.; IRA A. McCORMACK, General Superintendent, Brooklyn Heights Railroad Co., New York, N. Y.

STREET RAILWAY ACCOUNTANTS ASSOCIATION OF AMERICA

(Elected at Boston, Sept. 8, 1898.)

PRESIDENT—J. F. CALDERWOOD, Auditor, Twin City Rapid Transit Co., Minneapolis, Minn.

FIRST VICE-PRESIDENT—* E. R. L. TIGHE, Accountant, Brooklyn Rapid Transit Co., Brooklyn, N. Y.

SECOND VICE-PRESIDENT—R. LANCASTER WILLIAMS, Treasurer, Richmond Traction Co., Richmond, Va.

THIRD VICE-PRESIDENT—F. E. SMITH, Auditor, Lynn & Boston Railroad Co., Lynn, Mass.

SECRETARY AND TREASURER—W. B. BROCKWAY, Assistant Secretary, Toledo, Bowling Green & Fremont Railway Co., Toledo, O.

EXECUTIVE COMMITTEE—The Officers and H. L. WILSON, Auditor, Boston Elevated Railway Co., Boston, Mass.; H. E. BABCOCK, Auditor, Elmira & Horseheads Railway Co., Elmira, N. Y.; H. C. MACKAY, Comptroller, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.; J. D. FRASER, Secretary and Treasurer, Ottawa Electric Railway Co., Ottawa, Ontario.

1899—1900

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Chicago, Oct. 20, 1899.)

PRESIDENT—JOHN M. ROACH, President, Chicago Union Traction Co., Chicago, Ill.

FIRST VICE-PRESIDENT—JOHN A. RIGG, President, United Traction Co., Reading, Pa.

SECOND VICE-PRESIDENT—HERBERT H. VREELAND, President, Metropolitan Street Railway Co., New York, N. Y.

THIRD VICE-PRESIDENT—FRANK G. JONES, Vice-President, Memphis Street Railway Co., Memphis, Tenn.

SECRETARY AND TREASURER—T. C. PENINGTON, Treasurer, Chicago City Railway Co., Chicago, Ill.

EXECUTIVE COMMITTEE—President, Vice-Presidents and CHARLES S. SERGEANT, Second Vice-President, Boston Elevated Ry. Co., Boston, Mass.; CHARLES K. DURBIN, General Superintendent, Denver City Tramway Co., Denver, Col.; NICHOLAS S. HILL, JR., General Manager, Charleston Consolidated Gas & Electric Co., Charleston, S. C.; CHARLES W. WASON, President, Cleveland, Painesville & Eastern Railway Co., Cleveland, Ohio; * JOHN R. GRAHAM, President, Quincy & Boston Street Railway Co., Quincy, Mass.

* Deceased.

STREET RAILWAY ACCOUNTANTS ASSOCIATION OF AMERICA

(Elected at Chicago, Oct. 19, 1899.)

PRESIDENT — C. N. DUFFY, Auditor, Chicago City Railway Co., Chicago, Ill.

FIRST VICE-PRESIDENT — W. F. HAM, Auditor, Brooklyn Rapid Transit Co., Brooklyn, N. Y.

SECOND VICE-PRESIDENT — W. G. ROSS, Comptroller, Montreal Street Railway Co., Montreal, Quebec.

THIRD VICE-PRESIDENT — E. M. WHITE, Cashier, Hartford Street Railway Co., Hartford, Conn.

SECRETARY AND TREASURER — W. B. BROCKWAY, Assistant Secretary, Toledo, Bowling Green & Fremont Railway Co., Toledo, O.

EXECUTIVE COMMITTEE — The Officers and J. F. CALDERWOOD, Auditor, Twin City Rapid Transit Co., Minneapolis, Minn.; C. L. WIGHT, Auditor, Toledo Traction Co., Toledo, Ohio; C. K. DURBIN, Superintendent, Denver City Tramway Co., Denver, Col.; * C. O. SIMPSON, Auditor, Augusta Railway & Electric Co., Augusta, Ga.

1900-1901

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Kansas City, Oct. 19, 1900.)

PRESIDENT — WALTON H. HOLMES, President, Metropolitan Street Railway Co., Kansas City, Mo.

FIRST VICE-PRESIDENT — HERBERT H. VREELAND, President, Metropolitan Street Railway Co., New York, N. Y.

SECOND VICE-PRESIDENT — N. H. HEFT, President, Meriden Electric Railroad Co., Meriden, Conn.

THIRD VICE-PRESIDENT — JOHN B. McCLARY, General Manager, Birmingham Railway, Light & Power Co., Birmingham, Ala.

SECRETARY AND TREASURER — T. C. PENINGTON, Treasurer, Chicago City Railway Co., Chicago, Ill.

EXECUTIVE COMMITTEE — President, Vice-Presidents and JOHN M. ROACH, President, Chicago Union Traction Co., Chicago, Ill.; FRANK L. FULLER, General Manager, Wilkes-Barre & Wyoming Valley Traction Co., Wilkes-Barre, Pa.; GEORGE W. BAUMHOFF, General Manager, St. Louis Transit Co., St. Louis, Mo.; * JOHN R. GRAHAM, President, Brockton Street Railway Co., Brockton, Mass.; JOHN HARRIS, Superintendent, Cincinnati Street Railway Co., Cincinnati, O.

STREET RAILWAY ACCOUNTANTS ASSOCIATION OF AMERICA

(Elected at Kansas City, Oct. 18, 1900.)

PRESIDENT — WILLIAM F. HAM, Comptroller, Washington Traction & Electric Co., Washington, D. C.

FIRST VICE-PRESIDENT — J. A. HARDER, Auditor, Metropolitan Street Railway Co., Kansas City, Mo.

SECOND VICE-PRESIDENT — J. M. SMITH, Comptroller, Toronto Railway Co., Toronto, Ontario.

THIRD VICE-PRESIDENT — W. G. MCDOLE, Auditor, Cleveland Electric Railway Co., Cleveland, Ohio.

SECRETARY AND TREASURER — W. B. BROCKWAY, Assistant Secretary and Auditor, New Orleans & Carrollton Railroad Co., New Orleans, La.

* Deceased.

EXECUTIVE COMMITTEE—The Officers and C. N. DUFFY, Auditor, Chicago City Railway Co., Chicago, Ill.; C. S. MITCHELL, Auditor, United Traction Co., Pittsburg, Pa.; C. M. HEMINWAY, Cashier, Connecticut Lighting & Power Co., New York, N. Y.; G. E. TRIPP, Auditor, Seattle Electric Co., Boston, Mass.

1901-1902

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at New York, Oct. 11, 1901.)

PRESIDENT—HERBERT H. VREELAND, President, Interurban Street Railway Co., New York, N. Y.

FIRST VICE-PRESIDENT—CHAS. W. WASON, President, Cleveland, Painesville & Eastern Railroad Co., Cleveland, Ohio.

SECOND VICE-PRESIDENT—ELWIN C. FOSTER, Vice-President, Boston & Northern Street Railway Co., Boston, Mass.

THIRD VICE-PRESIDENT—H. M. SLOAN, General Manager, Calumet Electric Street Railway Co., Chicago, Ill.

SECRETARY AND TREASURER—T. C. PENINGTON, Treasurer, Chicago City Railway Co., Chicago, Ill.

EXECUTIVE COMMITTEE—President, Vice-Presidents and WALTON H. HOLMES, President, Metropolitan Street Railway Co., Kansas City, Mo.; JOHN A. RIGG, President, United Traction Co., Reading, Pa.; DANIEL B. DYER, President, Augusta Railway & Electric Co., Augusta, Ga.; T. J. NICHOLL, Vice-President, Rochester Railway Co., Rochester, N. Y.; GEORGE W. DICKINSON, Vice-President, Seattle Electric Co., Seattle, Wash.

STREET RAILWAY ACCOUNTANTS ASSOCIATION OF AMERICA

(Elected at New York, Oct. 11, 1901.)

PRESIDENT—H. C. MACKAY, Comptroller, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.

FIRST VICE-PRESIDENT—C. L. S. TINGLEY, Secretary, The American Railways Co., Philadelphia, Pa.

SECOND VICE-PRESIDENT—W. B. LONGYEAR, Auditor, Brooklyn Rapid Transit Co., Brooklyn, N. Y.

THIRD VICE-PRESIDENT—S. C. COOPER, Secretary, Cincinnati Traction Co., Cincinnati, Ohio.

SECRETARY AND TREASURER—W. B. BROCKWAY, Assistant Secretary, New Orleans & Carrollton Railroad, Light & Power Co., New Orleans, La.

EXECUTIVE COMMITTEE—The Officers and W. F. HAM, Comptroller, Washington Traction & Electric Co., Washington, D. C.; F. R. HENRY, Auditor, St. Louis Transit Co., St. Louis, Mo.; IRWIN FULLERTON, Auditor, Detroit United Railway, Detroit, Mich.; D. DANA BARTLETT, General Auditor, Massachusetts Electric Co., Boston, Mass.

1902-1903

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Detroit, Oct. 10, 1902.)

PRESIDENT—JERE C. HUTCHINS, President, Detroit United Railway, Detroit, Mich.

FIRST VICE-PRESIDENT—W. CARYL ELY, President, International Railway Co., Buffalo, N. Y.

SECOND VICE-PRESIDENT — W. KESLEY SCHOEPP, President, Cincinnati Traction Co., Cincinnati, Ohio.

THIRD VICE-PRESIDENT — P. S. ARKWRIGHT, President, Georgia Railway & Electric Co., Atlanta, Ga.

SECRETARY AND TREASURER — T. C. PENINGTON, Treasurer, Chicago City Railway Co., Chicago, Ill.

EXECUTIVE COMMITTEE — President, Vice-Presidents and HERBERT H. VREELAND, President, Interurban Street Railway Co., New York, N. Y.; RICHARD T. LAFFIN, General Manager, Worcester Consolidated Street Railway Co., Worcester, Mass.; ANDREW RADEL, Vice-President, Middlesex & Somerset Traction Co., Bridgeport, Conn.; WALTER P. READ, Vice-President, Consolidated Railway & Power Co., Salt Lake City, Utah; WILLARD J. HIELD, General Manager, Twin City Rapid Transit Co., Minneapolis, Minn.

STREET RAILWAY ACCOUNTANTS ASSOCIATION OF AMERICA

(Elected at Detroit, Oct. 10, 1902.)

PRESIDENT — HENRY J. DAVIES, Secretary, Cleveland Electric Railway Co., Cleveland, Ohio.

FIRST VICE-PRESIDENT — IRWIN FULLERTON, General Auditor, Detroit United Railway, Detroit, Mich.

SECOND VICE-PRESIDENT — D. DANA BARTLETT, General Auditor, Boston & Northern Railroad, Boston, Mass.

THIRD VICE-PRESIDENT — J. B. HOGARTH, Auditor, Denver City Tramway Co., Denver, Col.

SECRETARY AND TREASURER — W. B. BROCKWAY, Consulting Accountant, Birmingham Railway, Light & Power Co., Yonkers, N. Y.

EXECUTIVE COMMITTEE — The Officers and H. C. MACKAY, Comptroller, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.; O. M. HOFFMAN, Treasurer, Conestoga Traction Co., Lancaster, Pa.; E. M. WHITE, Cashier, Hartford Street Railway Co., Hartford, Conn.; J. J. MAGILTON, Assistant Treasurer, Schenectady Railway Co., Schenectady, N. Y.

1903

AMERICAN RAILWAY MECHANICAL AND ELECTRICAL ASSOCIATION

(Elected at Cleveland, Feb. 16, 1903.)

PRESIDENT — THOMAS FARMER, Master Mechanic, Detroit United Railway, Detroit, Mich.

FIRST VICE-PRESIDENT — E. W. OLDS, Superintendent of Rolling Stock, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.

SECOND VICE-PRESIDENT — ALFRED GREEN, Master Mechanic, Rochester Railway Co., Rochester, N. Y.

THIRD VICE-PRESIDENT — * C. F. BAKER, Superintendent of Motive Power and Machinery, Boston Elevated Railway Co., Boston, Mass.

SECRETARY AND TREASURER — S. W. MOWER, Detroit United Railway, Detroit, Mich.

EXECUTIVE COMMITTEE — The Officers and * W. O. MUNDY, Master Mechanic, St. Louis Transit Co., St. Louis, Mo.; T. J. MULLEN, Master Mechanic, Scranton Railway Co., Scranton, Pa.; H. H. ADAMS, Superintendent of Shops, The United Railways & Electric Co., Baltimore, Md.; D. F. CARVER, Chief Engineer, The Cleveland Electric Railway Co., Cleveland, Ohio.

* Deceased.

1903-1904

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at Saratoga Springs, Sept. 4, 1903.)

PRESIDENT — HON. W. CARYL ELY, President, International Railway Co., Buffalo, N. Y.

FIRST VICE-PRESIDENT — ELWIN C. FOSTER, President, New Orleans Railways Co., New Orleans, La.

SECOND VICE-PRESIDENT — JOHN GRANT, General Superintendent, St. Louis Transit Co., St. Louis, Mo.

THIRD VICE-PRESIDENT — JAMES F. SHAW, General Manager, Boston & Worcester Street Railway Co., Boston, Mass.

SECRETARY AND TREASURER — T. C. PENINGTON, Treasurer, Chicago City Railway Co., Chicago, Ill.

EXECUTIVE COMMITTEE — President, Vice-Presidents and JERE C. HUTCHINS, President, Detroit United Railway, Detroit, Mich.; ADDISON B. COLVIN, President, Hudson Valley Railway Co., Glens Falls, N. Y.; G. TRACY ROGERS, President, Binghamton Railway Co., Binghamton, N. Y.; W. A. SMITH, General Manager, Omaha & Council Bluffs Railway Co., Omaha, Neb.; S. L. NELSON, General Manager, Wichita Railway & Light Co., Wichita, Kan.

STREET RAILWAY ACCOUNTANTS ASSOCIATION OF AMERICA

(Elected at Saratoga Springs, Sept. 4, 1903.)

PRESIDENT — F. E. SMITH, Auditor, Chicago Union Traction Co., Chicago, Ill.

FIRST VICE-PRESIDENT — F. R. HENRY, Auditor, St. Louis Transit Co., St. Louis, Mo.

SECOND VICE-PRESIDENT — * C. O. SIMPSON, Treasurer, Birmingham Railway, Light & Power Co., Birmingham, Ala.

THIRD VICE-PRESIDENT — J. J. MAGILTON, Assistant Treasurer, Schenectady Railway Co., Schenectady, N. Y.

SECRETARY AND TREASURER — W. B. BROCKWAY, General Auditor, Nashville (Tenn.) Railway & Light Co., Yonkers, N. Y.

EXECUTIVE COMMITTEE — The Officers and H. J. DAVIES, Secretary, Cleveland Electric Railway Co., Cleveland, Ohio; S. C. ROGERS, Auditor, Youngstown-Sharon Railway & Light Co., Youngstown, Ohio; S. G. BOYLE, Secretary-Treasurer, Louisville Railway Co., Louisville, Ky.; H. M. PEASE, Auditor, International Railway Co., Buffalo, N. Y.

AMERICAN RAILWAY MECHANICAL AND ELECTRICAL ASSOCIATION

(Elected at Saratoga Springs, Sept. 3, 1903.)

PRESIDENT — E. W. OLDS, Superintendent of Rolling Stock, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.

FIRST VICE-PRESIDENT — ALFRED GREEN, Master Mechanic, Rochester Railway Co., Rochester, N. Y.

SECOND VICE-PRESIDENT — * C. F. BAKER, Superintendent of Motive Power and Machinery, Boston Elevated Railway Co., Boston, Mass.

THIRD VICE-PRESIDENT — * W. O. MUNDY, Master Mechanic, St. Louis Transit Co., St. Louis, Mo.

* Deceased.

SECRETARY AND TREASURER — S. W. MOWER, Detroit United Railway, Detroit, Mich.

EXECUTIVE COMMITTEE — The Officers and T. J. MULLEN, Master Mechanic, Scranton Railway Co., Scranton, Pa.; H. H. ADAMS, Superintendent of Shops, The United Railways & Electric Co., Baltimore, Md.; D. F. CARVER, Chief Engineer, Public Service Corporation of New Jersey, Jersey City, N. J.; H. J. LAKE, Master Mechanic, Muncie, Hartford & Ft. Wayne Railway Co., Muncie, Ind.

1904-1905

AMERICAN STREET RAILWAY ASSOCIATION

(Elected at St. Louis, Oct. 13, 1904.)

PRESIDENT — HON. W. CARYL ELY, President, International Railway Co., Buffalo, N. Y.

FIRST VICE-PRESIDENT — ELWIN C. FOSTER, President, New Orleans Railways Co., New Orleans, La.

SECOND VICE-PRESIDENT — JOHN I. BEGGS, President, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.

THIRD VICE-PRESIDENT — RICHARD McCULLOCH, Assistant General Manager, United Railways Co. of St. Louis, St. Louis, Mo.

SECRETARY AND TREASURER — T. C. PENINGTON, Treasurer, Chicago City Railway Co., Chicago, Ill.

EXECUTIVE COMMITTEE — President, Vice-Presidents and JOHN J. STANLEY, General Manager, Cleveland Electric Railway Co., Cleveland, Ohio; HOWARD F. GRANT, Manager, Seattle Electric Co., Seattle, Wash.; * CALVIN G. GOODRICH, Vice-President, Twin City Rapid Transit Co., Minneapolis, Minn.; FRANK G. JONES, Vice-President, Memphis Street Railway Co., Memphis, Tenn.; WALTER E. HARRINGTON, General Superintendent, South Jersey Division, Public Service Corporation of New Jersey, Camden, N. J.

STREET RAILWAY ACCOUNTANTS ASSOCIATION OF AMERICA

(Elected at St. Louis, Oct. 15, 1904.)

PRESIDENT — W. G. ROSS, Managing Director, Montreal Street Railway Co., Montreal, Quebec.

FIRST VICE-PRESIDENT — FRANK R. HENRY, Auditor, United Railways Co. of St. Louis, St. Louis, Mo.

SECOND VICE-PRESIDENT — ISAAC MCQUILKIN, Comptroller, Indiana Union Traction Co., Anderson, Ind.

THIRD VICE-PRESIDENT — J. W. LESTER, Treasurer, Worcester Consolidated Street Railway Co., Worcester, Mass.

SECRETARY AND TREASURER — ELMER M. WHITE, Assistant Secretary and Assistant Treasurer, Birmingham Railway, Light & Power Co., Birmingham, Ala.

EXECUTIVE COMMITTEE — The Officers and F. E. SMITH, Auditor, Chicago Union Traction Co., Chicago, Ill.; G. B. WILLCUTT, Secretary, United Railroads of San Francisco, San Francisco, Cal.; A. L. LINN, JR., General Manager, Fairmont and Clarksburg Traction Co., Fairmont, W. Va.; P. S. YOUNG, Comptroller, Public Service Corporation of New Jersey, Newark, N. J.

* Deceased.

AMERICAN RAILWAY MECHANICAL AND ELECTRICAL ASSOCIATION

(Elected at St. Louis, Oct. 11, 1904.)

PRESIDENT — * C. F. BAKER, Superintendent of Motive Power and Machinery, Boston Elevated Railway Co., Boston, Mass.

FIRST VICE-PRESIDENT — H. H. ADAMS, Superintendent of Shops, The United Railways & Electric Co., Baltimore, Md.

SECOND VICE-PRESIDENT — JOHN MILLAR, Master Mechanic, International Railway Co., Buffalo, N. Y.

THIRD VICE-PRESIDENT — FRED. G. SIMMONS, Superintendent of Construction and Maintenance of Way, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.

SECRETARY AND TREASURER — S. W. MOWER, Detroit United Railway, Detroit, Mich.

EXECUTIVE COMMITTEE — The Officers and D. F. CARVER, Chief Engineer, Public Service Corporation of New Jersey, Jersey City, N. J.; J. S. DOYLE, Master Mechanic, Interborough Rapid Transit Co., New York, N. Y.; C. C. LEWIS, Chief Engineer, Schenectady Railway Co., Schenectady, N. Y.; W. H. MCALONEY, Superintendent of Shops, Denver City Tramway Co., Denver, Col.; E. W. OLDS, Superintendent of Rolling Stock, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis. (to serve from February, 1905, the unexpired term of C. C. Lewis).

STREET RAILWAY CLAIM AGENTS ASSOCIATION OF AMERICA

(Elected at St. Louis, Oct. 12, 1904.)

PRESIDENT — W. A. DIBBS, Claim Agent, New York City Railway Co., New York, N. Y.

VICE-PRESIDENT — E. W. O'CONNOR, Claim Agent, Savannah Electric Co., Savannah, Ga.

SECRETARY AND TREASURER — B. B. DAVIS, Claim Agent, Columbus Railway & Light Co., Columbus, Ohio.

EXECUTIVE COMMITTEE — The Officers and W. H. RENAUD, Jr., Claim Agent, New Orleans Railway Co., New Orleans, La.; * WM. WHITE, Claim Agent, Chicago City Railway Co., Chicago, Ill.; * J. P. FEENEY, Claim Agent, Public Service Corporation of New Jersey, Newark, N. J.

1905-1906

AMERICAN STREET AND INTERURBAN RAILWAY ASSOCIATION

AMERICAN ASSOCIATION

(Elected at Philadelphia Sept. 28, 1905.)

PRESIDENT — HON. W. CARYL ELY, President, Ohio Valley Finance Co., Buffalo, N. Y.

FIRST VICE-PRESIDENT — JOHN I. BEGGS, President, The Milwaukee Electric Railway & Light Co., and United Railways of St. Louis, Milwaukee, Wis.

SECOND VICE-PRESIDENT — * CALVIN G. GOODRICH, Vice-President, Twin City Rapid Transit Co., Minneapolis, Minn.

THIRD VICE-PRESIDENT — JAMES F. SHAW, President, Boston & Worcester Electric Co., Boston, Mass.

SECRETARY AND TREASURER — BERNARD V. SWENSON, 60 Wall Street, New York, N. Y.

* Deceased.

EXECUTIVE COMMITTEE—President, Vice-Presidents and W. B. BROCKWAY, Auditor, Nashville (Tenn.) Railway & Light Co., President, American Street & Interurban Railway Accountants' Association, Yonkers, N. Y.; H. H. ADAMS, Superintendent of Shops, The United Railways & Electric Co.; President, American Street & Interurban Railway Engineering Association, Baltimore, Md.; S. L. RHOADES, General Claim Agent, Philadelphia Rapid Transit Co.; President, American Street & Interurban Railway Claim Agents' Association, Philadelphia, Pa.

ACCOUNTANTS ASSOCIATION

(Elected at Philadelphia, Sept. 29, 1905.)

PRESIDENT—W. B. BROCKWAY, General Auditor, Nashville (Tenn.) Railway & Light Co., Yonkers, N. Y.

FIRST VICE-PRESIDENT—P. S. YOUNG, Comptroller, Public Service Corporation of New Jersey, Newark, N. J.

SECOND VICE-PRESIDENT—ROBT. N. WALLIS, Treasurer, Fitchburg & Leominster Street Railway Co., Fitchburg, Mass.

THIRD VICE-PRESIDENT—H. A. FERRANDOU, Auditor and Treasurer, New Orleans Railway & Light Co., New Orleans, La.

SECRETARY AND TREASURER—ELMER M. WHITE, Treasurer and Auditor, Birmingham Railway, Light & Power Co., Birmingham, Ala.

EXECUTIVE COMMITTEE—The Officers and W. G. ROSS, Managing Director, Montreal Street Railway Co., Montreal, Quebec; C. L. S. TINGLEY, Second Vice-President, The American Railways Co., Philadelphia, Pa.; F. DABNEY, Assistant Treasurer, Seattle Electric Co., Seattle, Wash.; † J. H. PARDEE, General Manager, Rochester & Eastern Rapid Ry. Co., Canandaigua, N. Y.

ENGINEERING ASSOCIATION

(Elected at Philadelphia, Sept. 26, 1905.)

PRESIDENT—H. H. ADAMS, Superintendent of Shops, The United Railways & Electric Co., Baltimore, Md.

FIRST VICE-PRESIDENT—FRED. G. SIMMONS, Superintendent of Construction and Maintenance of Way, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.

SECOND VICE-PRESIDENT—J. S. DOYLE, Superintendent of Car Equipment, Interborough Rapid Transit Co., New York, N. Y.

THIRD VICE-PRESIDENT—PAUL WINSOR, Chief Engineer of Motive Power and Rolling Stock, Boston Elevated Railway Co., Boston, Mass.

SECRETARY AND TREASURER—S. W. MOWER, General Manager, South-Western Traction Co., London, Ont.

EXECUTIVE COMMITTEE—The Officers and W. S. TWINING, Chief Engineer, Philadelphia Rapid Transit Co., Philadelphia, Pa.; FRED N. BUSHNELL, Chief Engineer, The Rhode Island Co., Providence, R. I.; † W. BOARDMAN REED, Engineer, Maintenance of Way and Buildings, New York City Railway Co., New York, N. Y.; A. D. CAMPBELL, Master Mechanic, Seattle Electric Co., Seattle, Wash.; W. T. DOUGAN, Engineer, Maintenance of Way and Buildings, New York City Railway Co., New York, N. Y. (appointed August, 1906, to fill unexpired term of W. Boardman Reed, resigned).

† Resigned.

CLAIM AGENTS ASSOCIATION

(Elected at Philadelphia, Sept. 26, 1905.)

PRESIDENT—S. L. RHOADES, Chief Claim Agent, Philadelphia Rapid Transit, Co., Philadelphia, Pa.

FIRST VICE-PRESIDENT—E. W. O'CONNOR, Claim Agent, Savannah Electric Co., Savannah, Ga.

SECOND VICE-PRESIDENT—HENRY C. BRADLEY, Claim Agent, Chicago Union Traction Co., Chicago, Ill.

THIRD VICE-PRESIDENT—ANDREW J. FARRELL, Claim Agent, International Railway Co., Buffalo, N. Y.

SECRETARY AND TREASURER—B. B. DAVIS, Claim Agent, Columbus Railway & Light Co., Columbus, Ohio.

EXECUTIVE COMMITTEE—The Officers and JAMES R. PRATT, Assistant General Manager, United Railways & Electric Co., Baltimore, Md.; W. H. RENAUD, JR., Claim Agent, New Orleans Railway & Light Co., New Orleans, La.; H. V. DROWN, Claim Agent, The Rhode Island Co., Providence, R. I.

1906-1907

**AMERICAN STREET AND INTERURBAN RAILWAY
ASSOCIATION**

AMERICAN ASSOCIATION

(Elected at Columbus, Oct. 19, 1906.)

PRESIDENT—JOHN I. BEGGS, President, The Milwaukee Electric Railway & Light Co., and United Railways of St. Louis, Milwaukee, Wis.

FIRST VICE-PRESIDENT—* CALVIN G. GOODRICH, Vice-President, Twin City Rapid Transit Co., Minneapolis, Minn.

SECOND VICE-PRESIDENT—JAMES F. SHAW, President, Boston & Worcester Electric Cos., Boston, Mass.

THIRD VICE-PRESIDENT—ARTHUR W. BRADY, President, Indiana Union Traction Co., Anderson, Ind.

SECRETARY AND TREASURER—BERNARD V. SWENSON, 29 West Thirty-ninth Street, New York, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and C. L. S. TINGLEY, Second Vice-President, American Railways Co.; President, American Street & Interurban Railway Accountants' Association, Philadelphia, Pa.; H. H. ADAMS, Superintendent of Shops, The United Railways & Electric Co.; President, American Street & Interurban Railway Engineering Association, Baltimore, Md.; HENRY C. BRADLEY, Claim Agent, Chicago Union Traction Co.; Acting President, American Street & Interurban Railway Claim Agents' Association, Chicago, Ill.

ACCOUNTANTS ASSOCIATION

(Elected at Columbus, Oct. 17, 1906.)

PRESIDENT—C. L. S. TINGLEY, Second Vice-President, The American Railways Co., Philadelphia, Pa.

FIRST VICE-PRESIDENT—J. H. NEAL, Auditor Disbursements, Boston Elevated Railway Co., Boston, Mass.

SECOND VICE-PRESIDENT—FRANK R. HENRY, Auditor, United Railways Co. of St. Louis, St. Louis, Mo.

THIRD VICE-PRESIDENT—C. L. WIGHT, Auditor, Des Moines City Railway Co., Des Moines, Iowa.

* Deceased.

SECRETARY AND TREASURER—ELMER M. WHITE, Treasurer and Auditor, Birmingham Railway, Light & Power Co., Birmingham, Ala.

EXECUTIVE COMMITTEE—The Officers and W. B. BROCKWAY, General Auditor, Nashville (Tenn.) Railway & Light Co., Yonkers, N. Y.; H. T. BUNN, Treasurer and Auditor, Knoxville Railway & Light Co., Knoxville, Tenn.; A. STUART PRATT, Treasurer, Stone & Webster Cos., Boston, Mass.; H. S. SWIFT, Secretary and Auditor, Toledo Railways & Light Co., Toledo, Ohio.

ENGINEERING ASSOCIATION

(Elected at Columbus, Oct. 17, 1906.)

PRESIDENT—H. H. ADAMS, Superintendent of Shops, The United Railways & Electric Co., Baltimore, Md.

FIRST VICE-PRESIDENT—FRED G. SIMMONS, Superintendent of Construction and Maintenance of Way, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.

SECOND VICE-PRESIDENT—J. S. DOYLE, Superintendent of Car Equipment, Interborough Rapid Transit Co., New York, N. Y.

THIRD VICE-PRESIDENT—PAUL WINSOR, Chief Engineer of Motive Power and Rolling Stock, Boston Elevated Railway Co., Boston, Mass.

SECRETARY AND TREASURER—S. W. MOWER, General Manager, South-Western Traction Co., London, Ont.

EXECUTIVE COMMITTEE—The Officers and * F. H. LINCOLN, Assistant General Manager, Philadelphia Rapid Transit Co., Philadelphia, Pa.; FRED N. BUSHNELL, Chief Engineer, The Rhode Island Co., Providence, R. I.; W. T. DOUGAN, Engineer Maintenance of Way, New York City Railway Co., New York, N. Y.; H. B. FLEMING, Chief Engineer, Chicago City Railway Co., Chicago, Ill.

CLAIM AGENTS ASSOCIATION

(Elected at Columbus, Oct. 17, 1906.)

† **ACTING PRESIDENT**—HENRY C. BRADLEY, Claim Adjuster, Chicago Union Traction Co., Chicago, Ill.

SECOND VICE-PRESIDENT—ANDREW J. FARRELL, Claim Agent, International Railway Co., Buffalo, N. Y.

THIRD VICE-PRESIDENT—W. F. WEH, Claim Agent, Cleveland Electric Railway Co., Cleveland, Ohio.

SECRETARY AND TREASURER—B. B. DAVIS, Claim Adjuster, Columbus Railway & Light Co., Columbus, Ohio.

EXECUTIVE COMMITTEE—The Officers and CHARLES B. HARDIN, Claim Agent, United Railways Co. of St. Louis, St. Louis, Mo.; PETER C. NICKEL, Claim Agent, New York City Railway Co., New York, N. Y.; F. W. JOHNSON, Assistant General Claim Agent, Philadelphia Rapid Transit Co., Philadelphia, Pa.; E. C. CARPENTER, Claim Adjuster, Indiana Union Traction Co., Anderson, Ind.; W. H. RENAUD, JR., Claim Agent, New Orleans Railway & Light Co., New Orleans, La.

* Deceased.

† S. L. RHOADES was elected President, but resigned early in 1907, Mr. Bradley, as Vice-President, serving out his unexpired term.

1907-1908

**AMERICAN STREET AND INTERURBAN RAILWAY
ASSOCIATION**

AMERICAN ASSOCIATION

(Elected at Atlantic City, Oct. 18, 1907.)

PRESIDENT—* CALVIN G. GOODRICH, Vice-President, Twin City Rapid Transit Co., Minneapolis, Minn.

FIRST VICE-PRESIDENT—JAMES F. SHAW, President, Boston & Worcester Electric Cos., Boston, Mass.

SECOND VICE-PRESIDENT—ARTHUR W. BRADY, President, Indiana Union Traction Co., Anderson, Ind.

THIRD VICE-PRESIDENT—THOMAS N. McCARTER, President, Public Service Railway Co., Newark, N. J.

SECRETARY AND TREASURER—BERNARD V. SWENSON, 29 West Thirty-ninth Street, New York, N. Y.

EXECUTIVE COMMITTEE—President, Vice-President and R. N. WALLIS, Treasurer, Fitchburg & Leominster Street Railway Co. (Acting President, American Street and Interurban Railway Accountants' Association), Fitchburg, Mass.; FRED G. SIMMONS, Superintendent of Construction and Maintenance of Way, The Milwaukee Electric Railway & Light Co. (President, American Street and Interurban Railway Engineering Association), Milwaukee, Wis.; H. R. GOSHORN, General Claim Agent, Philadelphia Rapid Transit Co. (President, American Street and Interurban Railway Claim Agents' Association), Philadelphia, Pa.; C. LOOMIS ALLEN, Vice-President and General Manager, Utica & Mohawk Valley Railway Co. (President, American Street and Interurban Railway Transportation and Traffic Association), Utica, N. Y.

ACCOUNTANTS ASSOCIATION

(Elected at Atlantic City, Oct. 17, 1907.)

† **PRESIDENT**—FRANK R. HENRY, Auditor, United Railways Co. of St. Louis, St. Louis, Mo.

FIRST VICE-PRESIDENT—R. N. WALLIS, Treasurer, Fitchburg & Leominster Street Railway Co., Fitchburg, Mass.

SECOND VICE-PRESIDENT—W. H. FORSE, JR., Secretary and Treasurer, Indiana Union Traction Co., Anderson, Ind.

THIRD VICE-PRESIDENT—S. C. ROGER, Treasurer and Auditor, Mahoning & Shenango Railway & Light Co., Youngstown, Ohio.

SECRETARY AND TREASURER—ELMER M. WHITE, Auditor, Coney Island & Brooklyn Railroad Co., Brooklyn, N. Y.

EXECUTIVE COMMITTEE—The Officers and C. L. S. TINGLEY, Second Vice-President, The American Railways Co., Philadelphia, Pa.; A. L. LINN, JR., General Auditor, The Mohawk Valley Lines, New York, N. Y.; A. R. PATTERSON, General Auditor, Savannah (Georgia) Electric Co., Boston, Mass.; H. E. WEEKS, Secretary-Treasurer, Tri-City Railway Co., Davenport, Iowa.

ENGINEERING ASSOCIATION

(Elected at Atlantic City, Oct. 16, 1907.)

PRESIDENT—FRED G. SIMMONS, Superintendent of Construction and Maintenance of Way, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.

* Deceased.

† Resigned early in 1908, Vice-President Wallis assuming the duties of the office.

FIRST VICE-PRESIDENT — PAUL WINSOR, Chief Engineer of Motive Power and Rolling Stock, Boston Elevated Railway Co., Boston, Mass.

SECOND VICE-PRESIDENT — * F. H. LINCOLN, Assistant General Manager, Philadelphia Rapid Transit Co., Philadelphia, Pa.

THIRD VICE-PRESIDENT — W. H. EVANS, Master Mechanic, International Railway Co., Buffalo, N. Y.

SECRETARY AND TREASURER — JOHN W. CORNING, Electrical Engineer, Boston Elevated Railway Co., Boston, Mass.

EXECUTIVE COMMITTEE — The Officers and W. J. HARVIE, Chief Engineer, Utica & Mohawk Valley Railway Co., Utica, N. Y.; WILLIAM ROBERTS, Superintendent of Motive Power, Northern Ohio Traction & Light Co., Akron, Ohio; E. O. ACKERMAN, Engineer Maintenance of Way, Columbus Railway & Light Co., Columbus, Ohio; JOHN Z. MURPHY, Electrical Engineer, Chicago Railways Co., Chicago, Ill.

CLAIM AGENTS ASSOCIATION

(Elected at Atlantic City, Oct. 16, 1907.)

PRESIDENT — H. R. GOSHORN, General Claim Agent, Philadelphia Rapid Transit Co., Philadelphia, Pa.

FIRST VICE-PRESIDENT — ANDREW J. FARRELL, Claim Agent, International Railway Co., Buffalo, N. Y.

SECOND VICE-PRESIDENT — W. F. WEH, Claim Agent, Cleveland Electric Railway Co., Cleveland, Ohio.

THIRD VICE-PRESIDENT — J. S. HARRISON, Claim Agent, Jacksonville Electric Co., Jacksonville, Fla.

SECRETARY AND TREASURER — B. B. DAVIS, Claim Adjuster, Columbus Railway & Light Co., Columbus, Ohio.

EXECUTIVE COMMITTEE — The Officers and PETER C. NICKEL, Claim Agent, New York City Railway Co., New York, N. Y.; CHARLES B. HARDIN, Claim Agent, United Railways Co. of St. Louis, St. Louis, Mo.; E. C. CARPENTER, Claim Adjuster, Indiana Union Traction Co., Anderson, Ind.; * EUGENE R. ROBERTS, Claim Attorney, Knoxville Railway & Light Co., Knoxville, Tenn.

TRANSPORTATION AND TRAFFIC ASSOCIATION

(Officers of Organization Meeting Held in New York, January 30, 1908.)

CHAIRMAN — HON. W. CARYL ELY, President, Ohio Valley Finance Company, Buffalo, N. Y.

SECRETARY — BERNARD V. SWENSON, Secretary and Treasurer, American Street and Interurban Railway Association, New York, N. Y.
(Officers Elected at Organization Meeting.)

PRESIDENT — C. LOOMIS ALLEN, Vice-President and General Manager, Utica & Mohawk Valley Railway Co., Utica, N. Y.

FIRST VICE-PRESIDENT — R. I. TODD, Vice-President and General Manager, Indianapolis Traction & Terminal Co., Indianapolis, Ind.

SECOND VICE-PRESIDENT — GEO. L. RADCLIFFE, Superintendent, Schenectady Railway Co., Schenectady, N. Y.

THIRD VICE-PRESIDENT — A. W. WARNOCK, General Passenger Agent, Twin City Rapid Transit Co., Minneapolis, Minn.

SECRETARY AND TREASURER — BERNARD V. SWENSON, 29 West Thirty-ninth Street, New York, N. Y.

EXECUTIVE COMMITTEE — The Officers and G. W. PARKER, General Express and Freight Agent, Detroit United Railway, Detroit,

* Deceased.

Mich.; H. C. PAGE, General Manager, Springfield Street Railway Co., Springfield, Mass.; N. W. BOLEN, Superintendent of Transportation, Public Service Railway Co., Newark, N. J.; H. A. DAVIS, Superintendent Railway Department, Nashville Railway and Light Co., Nashville, Tenn.

1908-1909

**AMERICAN STREET AND INTERURBAN RAILWAY
ASSOCIATION**

AMERICAN ASSOCIATION

(Elected at Atlantic City, Oct. 15, 1908.)

PRESIDENT—JAMES F. SHAW, President, Citizens' Electric Street Railway Co., Newburyport, Mass.

FIRST VICE-PRESIDENT—ARTHUR W. BRADY, President, Indiana Union Traction Co., Anderson, Ind.

SECOND VICE-PRESIDENT—THOMAS N. McCARTER, President, Public Service Railway Co., Newark, N. J.

THIRD VICE-PRESIDENT—GEORGE H. HARRIES, Second Vice-President, Washington Railway & Electric Co., Washington, D. C.

FOURTH VICE-PRESIDENT—CHARLES N. BLACK, Vice-President and General Manager, United Railroads of San Francisco, San Francisco, Cal.

SECRETARY AND TREASURER—BERNARD V. SWENSON, 29 West Thirty-ninth Street, New York, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and R. N. WALLIS, Treasurer, Fitchburg & Leominster Street Railway Co. (President, American Street and Interurban Railway Accountants' Association), Fitchburg, Mass.; PAUL WINSOR, Chief Engineer of Motive Power and Rolling Stock, Boston Elevated Railway Co. (President, American Street and Interurban Railway Engineering Associations), Boston, Mass.; C. B. HARDIN, Claim Agent, United Railway Co. of St. Louis (President, American Street and Interurban Railway Claim Agents' Association), St. Louis, Mo.; C. LOOMIS ALLEN, Vice-President and General Manager, Utica & Mohawk Valley Railway Co. (President, American Street and Interurban Railway Transportation and Traffic Association), Utica, N. Y.

ACCOUNTANTS ASSOCIATION

(Elected at Atlantic City, Oct. 16, 1908.)

PRESIDENT—R. N. WALLIS, Treasurer, Fitchburg & Leominster Street Railway Co., Fitchburg, Mass.

FIRST VICE-PRESIDENT—H. S. SWIFT, Secretary, Toledo Railways & Light Co., Toledo, Ohio.

SECOND VICE-PRESIDENT—S. L. REICHERT, Secretary and Auditor, Duluth Street Railway Co., Duluth, Minn.

THIRD VICE-PRESIDENT—FRANK DABNEY, Assistant Treasurer, Seattle Electric Co., Seattle, Wash.

SECRETARY AND TREASURER—H. E. WEEKS, Secretary-Treasurer, Tri-City Railway Co., Davenport, Iowa.

EXECUTIVE COMMITTEE—The Officers and W. H. BURGESS, Secretary-Treasurer, The Memphis Street Railway Co., Memphis, Tenn.; R. J. CLARKE, Assistant Comptroller, Toronto Railway Co., Toronto, Can.; C. H. LAHR, Auditor, Northern Ohio Traction & Light Co., Akron, Ohio; W. J. KEHL, Treasurer and Auditor, Norfolk & Portsmouth Traction Co., Norfolk, Va.

ENGINEERING ASSOCIATION

(Elected at Atlantic City, Oct. 16, 1908.)

PRESIDENT — PAUL WINSOR, Chief Engineer of Motive Power and Rolling Stock, Boston Elevated Railway Co., Boston, Mass.**FIRST VICE-PRESIDENT** — * F. H. LINCOLN, Assistant General Manager, Philadelphia Rapid Transit Co., Philadelphia, Pa.**SECOND VICE-PRESIDENT** — W. H. EVANS, Buffalo, N. Y.**THIRD VICE-PRESIDENT** — W. J. HARVEY, Chief Engineer, Utica and Mohawk Valley Railway Co., Utica, N. Y.**SECRETARY AND TREASURER** — JOHN W. CORNING, Electrical Engineer, Boston Elevated Railway Co., Boston, Mass.**EXECUTIVE COMMITTEE** — The Officers and WILLIAM ROBERTS, Superintendent of Motive Power, Northern Ohio Traction & Light Co., Akron, Ohio; E. O. ACKERMAN, Engineer Maintenance of Way, Columbus Railway & Light Co., Columbus, Ohio; L. L. SMITH, Master Mechanic, Chicago & Milwaukee Electric Railroad Co., Highwood, Ill.; MARTIN SCHREIBER, Engineer Maintenance of Way, Public Service Railway Co., Newark, N. J.**CLAIM AGENTS ASSOCIATION**

(Elected at Atlantic City, Oct. 14, 1908.)

PRESIDENT — C. B. HARDIN, Claim Agent, United Railways Co. of St. Louis.**FIRST VICE-PRESIDENT** — E. C. CARPENTER, Claim Adjuster, Indiana Union Traction Co., Anderson, Ind.**SECOND VICE-PRESIDENT** — J. S. HARRISON, Claim Agent, Jacksonville Electric Co., Jacksonville, Fla.**THIRD VICE-PRESIDENT** — F. J. RYAN, Claim Agent, Syracuse Rapid Transit Railway Co., Syracuse, N. Y.**SECRETARY AND TREASURER** — B. B. DAVIS, Claim Adjuster, Columbus Railway & Light Co., Columbus, Ohio.**EXECUTIVE COMMITTEE** — The Officers and JAMES R. PRATT, Assistant Manager, United Railways & Electric Co., Baltimore, Md.; JOHN J. REYNOLDS, Claim Agent, Boston Elevated Railway Co., Boston, Mass.; H. V. DROWN, General Claim Agent, Public Service Railway Co., Newark, N. J.; * EUGENE R. ROBERTS, Claim Attorney, Knoxville Railway & Light Co., Knoxville, Tenn.**TRANSPORTATION AND TRAFFIC ASSOCIATION**

(Elected at Atlantic City, Oct. 15, 1908.)

PRESIDENT — C. LOOMIS ALLEN, Vice-President and General Manager, Utica & Mohawk Valley Railway Co., Utica, N. Y.**FIRST VICE-PRESIDENT** — R. I. TODD, Vice-President and General Manager, Indianapolis Traction & Terminal Co., Indianapolis, Ind.**SECOND VICE-PRESIDENT** — GEO. L. RADCLIFFE, Superintendent, Schenectady Railway Co., Schenectady, N. Y.**THIRD VICE-PRESIDENT** — A. W. WARNOCK, General Passenger Agent, Twin City Rapid Transit Co., Minneapolis, Minn.**SECRETARY AND TREASURER** — BERNARD V. SWENSON, 29 West Thirty-ninth Street, New York, N. Y.**EXECUTIVE COMMITTEE** — The Officers and G. W. PARKER, General Express and Freight Agent, Detroit United Railway, Detroit, Mich.; H. C. PAGE, General Manager, Springfield Street Railway Co.,

* Deceased.

Springfield, Mass.; N. W. BOLEN, Superintendent of Transportation, Public Service Railway Co., Newark, N. J.; H. A. DAVIS, Superintendent Railway Department, Nashville Railway & Light Co., Nashville, Tenn.

1909-1910

**AMERICAN STREET AND INTERURBAN RAILWAY
ASSOCIATION**

AMERICAN ASSOCIATION

(Elected at Denver, Oct. 7, 1909.)

PRESIDENT — JAMES F. SHAW, President, Citizens' Electric Street Railway Co., Boston, Mass.

FIRST VICE-PRESIDENT — ARTHUR W. BRADY, President, Indiana Union Traction Co., Anderson, Ind.

SECOND VICE-PRESIDENT — THOMAS N. MCCARTER, President, Public Service Railway Co., Newark, N. J.

THIRD VICE-PRESIDENT — GEORGE H. HARRIES, Second Vice-President, Washington Railway & Electric Co., Washington, D. C.

FOURTH VICE-PRESIDENT — CHARLES N. BLACK, Vice-President and General Manager, United Railroads of San Francisco, San Francisco, Cal.

SECRETARY AND TREASURER — H. C. DONECKER, 29 West Thirty-Ninth Street, New York, N. Y.

EXECUTIVE COMMITTEE — President, Vice-President and H. S. SWIFT, Secretary and Auditor, Toledo Railways & Light Co. (President, American Street and Interurban Railway Accountants' Association), Toledo, Ohio; W. J. HARVIE, Chief Engineer, Utica & Mohawk Valley Railway Co. (First Vice-President, Acting President, American Street and Interurban Railway Engineering Association) Utica, N. Y.; E. C. CARPENTER, Claim Adjuster, Indiana Union Traction Co. (President, American Street and Interurban Railway Claim Agents' Association), Anderson, Ind.; R. I. TODD, Vice-President and General Manager, Indianapolis Traction & Terminal Co. (President, American Street and Interurban Railway Transportation and Traffic Association), Indianapolis, Ind.

ACCOUNTANTS ASSOCIATION

(Elected at Denver, Oct. 8, 1910.)

PRESIDENT — H. S. SWIFT, Secretary, Toledo Railways & Light Co., Toledo, Ohio.

FIRST VICE-PRESIDENT — A. L. LINN, JR., General Auditor, New York State Railways Lines, New York, N. Y.

SECOND VICE-PRESIDENT — *A. S. MICHENER, Vice-President, Tacoma Railway & Power Co., Boston, Mass.

THIRD VICE-PRESIDENT — N. E. STUBBS, Auditor, United Railways & Electric Co. of Baltimore, Baltimore, Md.

SECRETARY AND TREASURER — H. E. WEEKS, Secretary and Treasurer, Tri-City Railway Co., Davenport, Iowa.

EXECUTIVE COMMITTEE — The Officers and R. N. WALLIS, Treasurer, Fitchburg & Leominster Street Railway Co., Fitchburg, Mass.; W. J. THARP, Auditor, Little Rock Railway & Electric Co., Little Rock, Ark.; ROBERT MORRISON, JR., Secretary, Michigan United Railways Co., Jackson, Mich.; C. S. MITCHELL, Auditor, Pittsburgh Railways Co., Pittsburgh, Pa.

* Deceased.

ENGINEERING ASSOCIATION

(Elected at Denver, Oct. 8, 1909.)

PRESIDENT—† F. H. LINCOLN, Assistant General Manager, Philadelphia Rapid Transit Co., Philadelphia, Pa.**FIRST VICE-PRESIDENT** (acting President)—W. J. HARVIE, Chief Engineer, Syracuse Rapid Transit Railway Co., and Utica & Mohawk Valley Railway Co., Utica, N. Y.**SECOND VICE-PRESIDENT**—E. O. ACKERMAN, Engineer Maintenance of Way, Columbus Railway & Light Co., Columbus, Ohio.**THIRD VICE-PRESIDENT**—J. S. DOYLE, Superintendent of Car Equipment, Interborough Rapid Transit Co., New York, N. Y.**SECRETARY AND TREASURER**—JOHN W. CORNING, Electrical Engineer, Boston Elevated Railway Co., Boston, Mass.**EXECUTIVE COMMITTEE**—The Officers and MARTIN SCHREIBER, Engineer Maintenance of Way, Public Service Railway Co., Newark, N. J.; W. H. McALONEY, Superintendent of Rolling Stock, The Denver City Tramway Co., Denver, Colo.; JOHN LINDALL, Superintendent of Rolling Stock and Shops, Boston Elevated Railway Co., Boston, Mass.; THOMAS ELLIOTT, Chief Engineer, Cincinnati Traction Co., Cincinnati, Ohio.**CLAIM AGENTS ASSOCIATION**

(Elected at Denver, Oct. 6, 1909.)

PRESIDENT—E. C. CARPENTER, Claim Adjuster, Indiana Union Traction Co., Anderson, Ind.**FIRST VICE-PRESIDENT**—J. S. HARRISON, Claim Agent, Jacksonville Electric Co., Jacksonville, Fla.**SECOND VICE-PRESIDENT**—J. H. HANDLON, Claim Agent, United Railroads of San Francisco, San Francisco, Cal.**THIRD VICE-PRESIDENT**—H. K. BENNETT, Claim Agent, Fitchburg & Leominster Street Railway Co., Fitchburg, Mass.**SECRETARY AND TREASURER**—B. B. DAVIS, Claim Adjuster, Columbus Railway & Light Co., Columbus, Ohio.**EXECUTIVE COMMITTEE**—The Officers and JAMES R. PRATT, Assistant General Manager, United Railways & Electric Co. of Baltimore, Baltimore, Md.; H. V. DROWN, General Claim Agent, Public Service Railway Co., Newark, N. J.;* E. R. ROBERTS, Claim Agent, Knoxville Railway & Light Co., Knoxville, Tenn.; M. P. SPILLANE, Claims Attorney, Boston Elevated Railway Co., Boston, Mass.**TRANSPORTATION AND TRAFFIC ASSOCIATION**

(Elected at Denver, Oct. 7, 1909.)

PRESIDENT—R. I. TODD, Vice-President and General Manager, Indianapolis Traction & Terminal Co., Indianapolis, Ind.**FIRST VICE-PRESIDENT**—H. C. PAGE, General Manager, Worcester Consolidated Street Railway Co., Worcester, Mass.**SECOND VICE-PRESIDENT**—N. W. BOLEN, Superintendent of Transportation, Public Service Railway Co., Newark, N. J.**THIRD VICE-PRESIDENT**—G. W. PARKER, General Express and Freight Agent, Detroit United Railway, Detroit, Mich.**SECRETARY AND TREASURER**—H. C. DONECKER, 29 West Thirty-ninth Street, New York, N. Y.

* Deceased.

† Mr. Lincoln was killed on the railroad in July, 1910.

EXECUTIVE COMMITTEE — The Officers and J. N. SHANNAHAN, Vice-President and General Manager, Washington, Baltimore & Annapolis Electric Railway Co., Baltimore, Md.; DANA STEVENS, Vice-President and General Manager, The Cincinnati Traction Co., Cincinnati, Ohio; J. W. BROWN, Superintendent of Transportation, West Penn Railways Co., Connellsville, Pa.; A. H. MACKAY, General Traffic Manager, Tacoma Railway & Power Co., Tacoma, Wash.

1910-1911

**AMERICAN ELECTRIC RAILWAY ASSOCIATION
AMERICAN ASSOCIATION**

(Elected at Atlantic City, Oct. 13, 1910.)

PRESIDENT — ARTHUR W. BRADY, President, Indiana Union Traction Co., Anderson, Ind.

FIRST VICE-PRESIDENT — THOMAS N. MCCARTER, President, Public Service Railway Co., Newark, N. J.

SECOND VICE-PRESIDENT — GEORGE H. HARRIES, Second Vice-President, Washington Railway & Electric Co., Washington, D. C.

THIRD VICE-PRESIDENT — CHARLES N. BLACK, Vice-President and General Manager, United Railroads of San Francisco, San Francisco, Cal.

FOURTH VICE-PRESIDENT — W. G. ROSS, President, Quebec Railway, Light and Power Co., Quebec, Quebec.

SECRETARY AND TREASURER — H. C. DONECKER, 29 West Thirty-ninth Street, New York, N. Y.

EXECUTIVE COMMITTEE — President, Vice-President and W. H. FORSE, JR., Secretary and Treasurer, Indiana Union Traction Co. (President, American Electric Railway Accountants' Association), Anderson, Ind.; W. J. HARVIE, Chief Engineer, Utica & Mohawk Valley Railway Co. and Syracuse Rapid Transit Railway Co. (President, American Electric Railway Engineering Association), Syracuse, N. Y.; H. V. DROWN, General Claim Agent, Public Service Railway Co. (President, American Electric Railway Claim Agents' Association), Newark, N. J.; H. C. PAGE, General Manager, Worcester Consolidated Street Railway Co. (President, American Electric Railway Transportation and Traffic Association), Worcester, Mass.

ACCOUNTANTS ASSOCIATION

(Elected at Atlantic City, Oct. 13, 1910.)

PRESIDENT — W. H. FORSE, JR., Secretary and Treasurer, Indiana Union Traction Co., Anderson, Ind.

FIRST VICE-PRESIDENT — M. R. BOYLAN, General Auditor, Public Service Railway Co., Newark, N. J.

SECOND VICE-PRESIDENT — WILL BROWNE, Auditor, Utah Light & Railway Co., Salt Lake City, Utah.

THIRD VICE-PRESIDENT — H. E. SMITH, Comptroller, Montreal Street Railway Co., Montreal, Quebec.

SECRETARY AND TREASURER — H. E. WEEKS, Secretary and Treasurer, Tri-City Railway Co., Davenport, Iowa.

EXECUTIVE COMMITTEE — The Officers and L. T. HIXSON, Auditor, Terre Haute, Indianapolis & Eastern Traction Co., Indianapolis, Ind.; F. B. LASHER, Traveling Auditor, New York State Railways, New York, N. Y.; CHAS. H. LAHR, Auditor, The Northern Ohio Traction & Light Co., Akron, Ohio; FRANK J. PRYOR, JR., Comptroller, Scranton Railway Co., Philadelphia, Pa.

ENGINEERING ASSOCIATION

(Elected at Atlantic City, Oct. 13, 1910.)

PRESIDENT—W. J. HARVIE, Chief Engineer, Syracuse Rapid Transit Railway Co., and Utica & Mohawk Valley Railway Co., Syracuse, N. Y.**FIRST VICE-PRESIDENT**—E. O. ACKERMAN, Engineer Maintenance of Way, Columbus Railway & Light Co., Columbus, Ohio.**SECOND VICE-PRESIDENT**—J. S. DOYLE, Superintendent of Car Equipment, Interborough Rapid Transit Co., New York, N. Y.**THIRD VICE-PRESIDENT**—MARTIN SCHREIBER, Engineer Maintenance of Way, Public Service Railway Co., Newark, N. J.**SECRETARY AND TREASURER**—NORMAN LITCHFIELD, Engineer Car Equipment, Interborough Rapid Transit Co., New York, N. Y.**EXECUTIVE COMMITTEE**—The Officers and JOHN LINDALL, Superintendent Rolling Stock and Shops, Boston Elevated Railway Co., Boston, Mass.; E. J. BURDICK, Superintendent of Power, Detroit United Railway, Detroit, Mich.; G. H. KELSAY, Superintendent of Power, Indiana Union Traction Co., Anderson, Ind.; C. B. VOYNOW, Assistant Engineer of Way, Philadelphia Rapid Transit Co., Philadelphia, Pa.**CLAIM AGENTS ASSOCIATION**

(Elected at Atlantic City, Oct. 12, 1910.)

PRESIDENT—H. V. DROWN, General Claim Agent, Public Service Railway Co., Newark, N. J.**FIRST VICE-PRESIDENT**—H. K. BENNETT, Claim Agent, Fitchburg & Leominster Street Railway Co., Fitchburg, Mass.**SECOND VICE-PRESIDENT**—C. A. AVANT, Claim Attorney, Birmingham Railway, Light & Power Co., Birmingham, Ala.**THIRD VICE-PRESIDENT**—WALTER S. HEATON, Claim Agent, Los Angeles-Pacific Co., Los Angeles, Cal.**SECRETARY AND TREASURER**—B. B. DAVIS, Claim Adjuster, Columbus Railway & Light Co., Columbus, Ohio.**EXECUTIVE COMMITTEE**—The Officers and JAMES R. PRATT, Assistant General Manager, United Railways & Electric Co. of Baltimore, Baltimore, Md.; JOHN J. REYNOLDS, Claim Agent, Boston Elevated Railway Co., Boston, Mass.; J. H. HANDLON, Claim Agent, United Railroads of San Francisco, San Francisco, Cal.; WM. TICHENOR, Claim Agent, Terre Haute, Indianapolis & Eastern Traction Co., Indianapolis, Ind.**TRANSPORTATION AND TRAFFIC ASSOCIATION**

(Elected at Atlantic City, Oct. 13, 1910.)

PRESIDENT—H. C. PAGE, General Manager, Worcester Consolidated Street Railway Co., Worcester, Mass.**FIRST VICE-PRESIDENT**—J. N. SHANNAHAN, Railway Manager, J. G. White & Co., Inc., New York, N. Y.**SECOND VICE-PRESIDENT**—C. E. LEARNED, Superintendent of Inspection, Boston Elevated Railway Co., Boston, Mass.**THIRD VICE-PRESIDENT**—DANA STEVENS, Vice-President and General Manager, The Cincinnati Traction Co., Cincinnati, Ohio.**SECRETARY AND TREASURER**—H. C. DONECKER, New York, N. Y.**EXECUTIVE COMMITTEE**—C. D. EMMONS, General Manager, Chicago, South Bend & Northern Indiana Railway Co., South Bend,

Ind.; J. V. SULLIVAN, General Supervisor, Chicago Railways Co., Chicago, Ill.; J. W. GLENDENING, Treasurer, General Freight and Passenger Agent, Saginaw-Bay City Railway Co., Bay City, Mich.; A. GABOURY, Superintendent, Montreal Street Railway Co., Montreal, Quebec.

1911-1912

**AMERICAN ELECTRIC RAILWAY ASSOCIATION
AMERICAN ASSOCIATION**

(Elected at Atlantic City, Oct. 12, 1911.)

PRESIDENT—THOMAS N. McCARTER, President, Public Service Railway Co., Newark, N. J.

FIRST VICE-PRESIDENT—GEORGE H. HARRIES, President, Arkansas Valley Railway, Light & Power Co., Louisville, Ky.

SECOND VICE-PRESIDENT—CHARLES N. BLACK, Vice-President and General Manager, United Railroads of San Francisco, San Francisco, Cal.

THIRD VICE-PRESIDENT—C. LOOMIS ALLEN, President, Newport News & Old Point Railway & Electric Co., Syracuse, N. Y.

FOURTH VICE-PRESIDENT—C. L. HENRY, President, Indianapolis & Cincinnati Traction Co., Indianapolis, Ind.

SECRETARY AND TREASURER—H. C. DONECKER, 29 West Thirty-ninth Street, New York, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and P. S. YOUNG, Comptroller, Public Service Railway Co. (President, American Electric Railway Accountants' Association), Newark, N. J.; E. O. ACKERMAN, Engineer Maintenance of Way, Columbus Railway & Light Co. (President, American Electric Railway Engineering Association), Columbus, Ohio; H. K. BENNETT, Claim Agent, Fitchburg & Leominster Street Railway Co. (President, American Electric Railway Claim Agents' Association), Fitchburg, Mass.; J. N. SHANNAHAN, President, Pottsville Union Traction Co. (President, American Electric Railway Transportation and Traffic Association), New York, N. Y.

ACCOUNTANTS ASSOCIATION

(Elected at Atlantic City, Oct. 12, 1911.)

PRESIDENT—P. S. YOUNG, Comptroller, Public Service Railway Co., Newark, N. J.

FIRST VICE-PRESIDENT—L. T. HIXSON, Auditor, Terre Haute, Indianapolis & Eastern Traction Co., Indianapolis, Ind.

SECOND VICE-PRESIDENT—ELMER M. WHITE, Auditor, Coney Island & Brooklyn Railroad, Brooklyn, N. Y.

THIRD VICE-PRESIDENT—N. E. STUBBS, Auditor, United Railways & Electric Co. of Baltimore, Baltimore, Md.

SECRETARY AND TREASURER—H. E. WEEKS, Secretary and Treasurer, Tri-City Railway Co., Davenport, Iowa.

EXECUTIVE COMMITTEE—The Officers and JAMES ADKINS, Secretary and Treasurer, United Railways Company of St. Louis, St. Louis, Mo.; E. D. GAULT, Auditor, Mahoning & Shenango Railway & Light Co., Youngstown, Ohio; R. MORRISON, JR., Secretary, Michigan United Traction Co., Jackson, Mich.; M. W. GLOVER, Secretary and Auditor, Mobile Light & Railroad Co., Mobile, Ala.

ENGINEERING ASSOCIATION

(Elected at Atlantic City, Oct. 13, 1911.)

PRESIDENT—E. O. ACKERMAN, Engineer Maintenance of Way, Columbus Railway & Light Co., Columbus, Ohio.**FIRST VICE-PRESIDENT**—MARTIN SCHREIBER, Engineer Maintenance of Way, Public Service Railway Co., Newark, N. J.**SECOND VICE-PRESIDENT**—L. P. CRECELIOUS, Electric Engineer, The Cleveland Railway Co., Cleveland, Ohio.**THIRD VICE-PRESIDENT**—JOHN LINDALL, Superintendent Rolling Stock and Shops, Boston Elevated Railway Co., Boston, Mass.**SECRETARY AND TREASURER**—NORMAN LITCHFIELD, Engineer Car Equipment, Interborough Rapid Transit Co., New York, N. Y.**EXECUTIVE COMMITTEE**—The Officers and J. H. HANNA, Chief Engineer, Capital Traction Co., Washington, D. C.; E. J. BURDICK, Superintendent of Power, Detroit United Railway, Detroit, Mich.; B. F. WOOD, Assistant Engineer, Motive Power Dept., Pennsylvania Railroad Co., Altoona, Pa.; H. A. MULLETT, Superintendent of Rolling Stock, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.**CLAIM AGENTS ASSOCIATION**

(Elected at Atlantic City, Oct. 11, 1911.)

PRESIDENT—H. K. BENNETT, Claim Agent, Fitchburg & Leominster Street Railway Co., Fitchburg, Mass.**FIRST VICE-PRESIDENT**—C. A. AVANT, Claim Attorney, Birmingham Railway, Light & Power Co., Birmingham, Ala.**SECOND VICE-PRESIDENT**—R. H. SCHOENEN, Claim Agent, Lehigh Valley Transit Co., Allentown, Pa.**THIRD VICE-PRESIDENT**—W. F. WEH, Superintendent Accident Department, The Cleveland Railway Co., Cleveland, Ohio.**SECRETARY AND TREASURER**—B. B. DAVIS, Claim Adjuster, Columbus Railway & Light Co., Columbus, Ohio.**EXECUTIVE COMMITTEE**—The Officers and JAMES R. PRATT, Assistant General Manager, United Railways & Electric Co. of Baltimore, Baltimore, Md.; R. E. McDUGALL, Claim Agent, New York State Railways, Rochester, N. Y.; GEORGE CARSON, Claim Agent, Puget Sound Traction, Light & Power Co., Seattle Division, Seattle, Wash.; WM. TICHENOR, Claim Agent, Terre Haute, Indianapolis & Eastern Traction Co., Indianapolis, Ind.**TRANSPORTATION AND TRAFFIC ASSOCIATION**

(Elected at Atlantic City, Oct. 12, 1911.)

PRESIDENT—J. N. SHANNAHAN, President, Pottsville Union Traction Co., New York, N. Y.**FIRST VICE-PRESIDENT**—DANA STEVENS, Vice-President and General Manager, The Cincinnati Traction Co., Cincinnati, Ohio.**SECOND VICE-PRESIDENT**—D. A. HEGARTY, Manager, New Orleans Railway & Light Co., New Orleans, La.**THIRD VICE-PRESIDENT**—M. C. BRUSH, Assistant to Vice-President, Boston Elevated Railway Co., Boston, Mass.**SECRETARY AND TREASURER**—H. C. DONECKER, 29 West Thirty-ninth Street, New York, N. Y.

EXECUTIVE COMMITTEE—The Officers and A. GABOURY, Superintendent, Montreal Street Railway Co., Montreal, Quebec; C. F. HANDSHY, General Superintendent of Interurban Lines, Illinois Traction Co., Springfield, Ill.; C. B. BUCHANAN, General Manager, Virginia Railway & Power Co., Richmond, Va.; H. A. NICHOLL, General Manager, Indiana Union Traction Co., Anderson, Ind.

1912-1913

**AMERICAN ELECTRIC RAILWAY ASSOCIATION
AMERICAN ASSOCIATION**

(Elected at Chicago, Oct. 10, 1912.)

PRESIDENT—GEORGE H. HARRIES, President, Arkansas Valley Railway, Light & Power Co., Louisville, Ky.

FIRST VICE-PRESIDENT—CHARLES N. BLACK, Vice-President and General Manager, United Railroads of San Francisco, San Francisco, Cal.

SECOND VICE-PRESIDENT—C. LOOMIS ALLEN, President, Newport News & Old Point Railway & Electric Co., Syracuse, N. Y.

THIRD VICE-PRESIDENT—CHARLES L. HENRY, President, Indianapolis & Cincinnati Traction Co., Indianapolis, Ind.

FOURTH VICE-PRESIDENT—JOHN A. BEELER, Vice-President and General Manager, The Denver City Tramway Co., Denver, Colo.

SECRETARY AND TREASURER—H. C. DONECKER, 29 West Thirty-ninth Street, New York, N. Y.

EXECUTIVE COMMITTEE—President, Vice-Presidents and J. H. NEAL, Auditor, Boston Elevated Railway Co. (President, American Electric Railway Accountants' Association), Boston, Mass.; MARTIN SCHREIBER, Engineer Maintenance of Way, Public Service Railway Co. (President, American Electric Railway Engineering Association), Newark, N. J.; C. A. AVANT, Claim Attorney, Birmingham Railway, Light & Power Co. (President, American Electric Railway Claims Association), Birmingham, Ala.; DANA STEVENS, Vice-President, The Cincinnati Traction Co. (President, American Electric Railway Transportation and Traffic Association), Cincinnati, Ohio.

ACCOUNTANTS ASSOCIATION

(Elected at Chicago, Oct. 10, 1912.)

PRESIDENT—J. H. NEAL, General Auditor, Boston Elevated Railway Co., Boston, Mass.

FIRST VICE-PRESIDENT—M. W. GLOVER, Secretary and Auditor, Mobile Light and Railroad Co., Mobile, Ala.

SECOND VICE-PRESIDENT—G. W. KALWEIT, Auditor, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.

THIRD VICE-PRESIDENT—F. B. LASHER, Assistant Auditor, New York State Railways, New York, N. Y.

SECRETARY AND TREASURER—M. R. BOYLAN, General Auditor, Public Service Railway Co., Newark, N. J.

EXECUTIVE COMMITTEE—The Officers and F. E. WILKIN, General Auditor, Des Moines City Railway Co., Des Moines, Iowa; GEORGE G. WHITNEY, Chief Clerk, Washington Railway & Electric Co., Washington, D. C.; THOMAS P. KILFOYLE, Auditor, The Cleveland Railway Co., Cleveland, Ohio; ROBERT J. CLARK, Comptroller, Kansas City Railway & Light Co., Kansas City, Mo.

ENGINEERING ASSOCIATION

(Elected at Chicago, Oct. 11, 1912.)

PRESIDENT — MARTIN SCHREIBER, Engineer Maintenance of Way, Public Service Railway Co., Newark, N. J.**FIRST VICE-PRESIDENT** — L. P. CRECELIUS, Superintendent of Power and Electrical Engineer, The Cleveland Railway Co., Cleveland, Ohio.**SECOND VICE-PRESIDENT** — JOHN LINDALL, Superintendent Rolling Stock and Shops, Boston Elevated Railway Co., Boston, Mass.**THIRD VICE-PRESIDENT** — J. H. HANNA, Chief Engineer, Capital Traction Co., Washington, D. C.**SECRETARY AND TREASURER** — H. C. DONECKER, 29 West Thirty-ninth Street, New York, N. Y.**EXECUTIVE COMMITTEE** — The Officers and B. F. Wood, Assistant Engineer Motive Power Department, Pennsylvania Railroad Co., Altoona, Pa.; F. R. PHILLIPS, Superintendent of Equipment, Pittsburgh Railways Co., Pittsburgh, Pa.; J. Q. BROWN, Assistant to General Manager, San Francisco-Oakland Terminal Railways, Oakland, Cal.; NORMAN LITCHFIELD, Engineer Car Equipment, Interborough Rapid Transit Co., New York, N. Y.**CLAIMS ASSOCIATION**

(Elected at Chicago, Oct. 10, 1912.)

PRESIDENT — C. A. AVANT, Claim Attorney, Birmingham Railway, Light & Power Co., Birmingham, Ala.**FIRST VICE-PRESIDENT** — W. F. WEH, Superintendent Claim Department, The Cleveland Railway Co., Cleveland, Ohio.**SECOND VICE-PRESIDENT** — WM. TICHENOR, Claim Agent, Terra Haute, Indianapolis & Eastern Traction Co., Indianapolis, Ind.**THIRD VICE-PRESIDENT** — GEO. CARSON, Claim Agent, Puget Sound Traction, Light & Power Co., Seattle Division, Seattle, Wash.**SECRETARY AND TREASURER** — B. B. DAVIS, Claim Adjuster, Columbus Railway & Light Co., Columbus, Ohio.**EXECUTIVE COMMITTEE** — The Officers and R. E. McDUGALL, Claim Agent, New York State Railways, Rochester, N. Y.; C. G. RICE, Superintendent Claim Department, Pittsburgh Railways Co., Pittsburgh, Pa.; P. C. NICKEL, Claim Agent, New York Railways Co., New York, N. Y.; E. P. WALSH, Attorney, United Railways Co. of St. Louis, St. Louis, Mo.**TRANSPORTATION AND TRAFFIC ASSOCIATION**

(Elected at Chicago, Oct. 10, 1912.)

PRESIDENT — DANA STEVENS, Vice-President and General Manager, The Cincinnati Traction Co., Cincinnati, Ohio.**FIRST VICE-PRESIDENT** — D. A. HEGARTY, Manager, New Orleans Railway & Light Co., New Orleans, La.**SECOND VICE-PRESIDENT** — M. C. BRUSH, Second Vice-President, Boston Elevated Railway Co., Boston, Mass.**THIRD VICE-PRESIDENT** — H. A. NICHOLL, General Manager, Union Traction Co. of Indiana, Anderson, Ind.**SECRETARY AND TREASURER** — H. C. DONECKER, New York, N. Y.**EXECUTIVE COMMITTEE** — The Officers and C. B. BUCHANAN, General Manager, Virginia Railway & Power Co., Richmond, Va.; W.

R. W. GRIFFIN, General Manager, Tri-State Railway and Electric Co., East Liverpool, Ohio; L. C. BRADLEY, Vice-President and General Manager, Galveston-Houston Electric Co., Galveston, Tex.; J. McMILLAN, General Manager, Pacific Electric Railway Co., Los Angeles, Cal.

1913—1914

**AMERICAN ELECTRIC RAILWAY ASSOCIATION
AMERICAN ASSOCIATION**

(Elected at Atlantic City, Oct. 16, 1913.)

PRESIDENT — CHARLES N. BLACK, Vice-President and General Manager, United Railroads of San Francisco, San Francisco, Cal.

FIRST VICE-PRESIDENT — C. LOOMIS ALLEN, President, Newport News & Hampton Ry., Gas & Elec. Co., Syracuse, N. Y.

SECOND VICE-PRESIDENT — CHARLES L. HENRY, President, Indianapolis & Cincinnati Traction Co., Indianapolis, Ind.

THIRD VICE-PRESIDENT — JOHN A. BEELER, Vice-President and General Manager, Denver Tramways Co., Denver, Colo.

FOURTH VICE-PRESIDENT — L. S. STORRS, President, The Connecticut Company, New Haven, Conn.

SECRETARY-TREASURER — E. B. BURRITT, 29 West 39th street, New York, N. Y.

EXECUTIVE COMMITTEE — Presidents, Vice-Presidents and M. W. GLOVER, Secretary and Auditor, Mobile Light & Railroad Co., Mobile, Ala. (President Accountants' Association); J. H. HANNA, Chief Engineer, Capital Traction Co., Washington, D. C. (President Engineering Association); W. F. WEH, Superintendent Claim Department, The Cleveland Railway Co., Cleveland, O. (President Claims' Association); D. A. HEGARTY, Manager, New Orleans Railway & Light Co., New Orleans, La. (President Transportation and Traffic Association).

ACCOUNTANTS' ASSOCIATION

(Elected at Atlantic City, Oct. 17, 1913.)

PRESIDENT — M. W. GLOVER, Secretary and Auditor, Mobile Light & Railroad Co., Mobile, Ala.

FIRST VICE-PRESIDENT — T. P. KILFOYLE, Auditor, The Cleveland Railway Co., Cleveland, O.

SECOND VICE-PRESIDENT — A. H. KAYSER, General Auditor, San Diego Electric Railway Co., San Diego, Cal.

THIRD VICE-PRESIDENT — C. S. MITCHELL, Comptroller, Pittsburgh Railways Co., Pittsburgh, Pa.

SECRETARY-TREASURER — M. R. BOYLAN, General Auditor, Public Service Railway Co., Newark, N. J.

EXECUTIVE COMMITTEE — Officers and H. G. NICHOLSON, Auditor, Omaha & Council Bluffs Street Railway Co., Omaha, Neb.; H. D. VICKERS, Auditor, Roanoke Railway & Electric Co., Roanoke, Va.; WALTER SHROYER, Auditor, Union Traction Company of Indiana, Anderson, Ind.; HERBERT A. GIDNEY, Auditor, Barre & Montpelier Traction and Power Co., Montpelier, Vt.

ENGINEERING ASSOCIATION

(Elected at Atlantic City, Oct. 17, 1913.)

PRESIDENT — J. H. HANNA, Chief Engineer, Capital Traction Co., Washington, D. C.

FIRST VICE-PRESIDENT — L. P. CRECELIUS, Superintendent of Power, The Cleveland Railway Co., Cleveland, O.

SECOND VICE-PRESIDENT — JOHN LINDALL, Superintendent Rolling Stock and Shops, Boston Elevated Railway Co., Boston, Mass.

THIRD VICE-PRESIDENT — B. F. WOOD, Chief Engineer, United Gas & Electric Engineering Corporation, New York, N. Y.

SECRETARY-TREASURER — E. B. BURRITT, 29 West 39th street, New York, N. Y.

EXECUTIVE COMMITTEE — Officers and F. R. PHILLIPS, Superintendent of Equipment, Pittsburgh Railways Co., Pittsburgh, Pa.; NORMAN LITCHFIELD, Engineer, Car Equipment, Interborough Rapid Transit Co., New York, N. Y.; H. F. MERKER, Engineer, Maintenance of Way, East St. Louis & Suburban Railway Co., East St. Louis, Ill.; J. P. BARNES, General Manager, Syracuse & Suburban Railroad Co., Syracuse, N. Y.

CLAIMS' ASSOCIATION

(Elected at Atlantic City, Oct. 15, 1913.)

PRESIDENT — W. F. WEH, Superintendent Claim Department, The Cleveland Railway Co., Cleveland, O.

FIRST VICE-PRESIDENT — WILLIAM TICHENOR, Claim Agent, Terre Haute, Indianapolis and Eastern Traction Co., Indianapolis, Ind.

SECOND VICE-PRESIDENT — GEORGE CARSON, Claim Agent, Puget Sound Traction, Light and Power Co., Seattle, Wash.

THIRD VICE-PRESIDENT — R. E. MACDOUGALL, Claim Agent, New York State Railways, Rochester, N. Y.

SECRETARY-TREASURER — B. B. DAVIS, Claim Adjuster, The Columbus Railway, Power and Light Co., Columbus, O.

EXECUTIVE COMMITTEE — Officers and PETER C. NICKEL, Claim Agent, The New York Railways Co., New York, N. Y.; F. J. WHITEHEAD, Manager Claims Department, Washington Railway & Electric Co., Washington, D. C.; S. B. HARE, Claim Agent, Altoona & Logan Valley Traction Co., Altoona, Pa.; C. B. PROCTOR, Claim Agent, The Memphis Street Railway Co., Memphis, Tenn.

TRANSPORTATION AND TRAFFIC ASSOCIATION

(Elected at Atlantic City, Oct. 16, 1913.)

PRESIDENT — † D. A. HEGARTY, Manager, New Orleans Railway and Light Co., New Orleans, La.

FIRST VICE-PRESIDENT — M. C. BRUSH, Second Vice-President, Boston Elevated Railway Co., Boston, Mass.

SECOND VICE-PRESIDENT — H. A. NICHOLL, General Manager, Union Traction Company of Indiana, Anderson, Ind.

THIRD VICE-PRESIDENT — L. C. BRADLEY, Assistant District Manager, Stone & Webster Companies, Texas District, Dallas, Tex.

SECRETARY-TREASURER — E. B. BURRITT, 29 West 39th street, New York, N. Y.

EXECUTIVE COMMITTEE — Officers and R. E. DANFORTH, General Manager, Public Service Railway Co., Newark, N. J.; J. K.

Vice-President, J. G. White Management Corporation, New York, N. Y.; BRUCE CAMERON, Superintendent of Transportation, United Railways Company of St. Louis, St. Louis, Mo.; C. B. WELLS, Superintendent of Transportation, Denver Tramways Co., Denver, Col.

† Mr. Hegarty resigned March, 1914, and Mr. Brush acted as President for balance of the term.

1914-1915

**AMERICAN ELECTRIC RAILWAY ASSOCIATION
AMERICAN ASSOCIATION**

PRESIDENT—C. LOOMIS ALLEN, President, Newport News & Hampton Railway, Gas & Electric Co., Syracuse, N. Y.

FIRST VICE-PRESIDENT—CHARLES L. HENRY, President, Indianapolis & Cincinnati Traction Co., Indianapolis, Ind.

SECOND VICE-PRESIDENT—JOHN A. BEELER, Vice-President and General Manager, Denver Tramway Co., Denver, Colo.

THIRD VICE-PRESIDENT—L. S. STORRS, President, The Connecticut Company, New Haven, Conn.

FOURTH VICE-PRESIDENT—T. S. WILLIAMS, President, Brooklyn Rapid Transit System, Brooklyn, N. Y.

SECRETARY-TREASURER—E. B. BURRITT, 8 West 40th street, New York, N. Y.

EXECUTIVE COMMITTEE—Presidents, Vice-Presidents and C. S. MITCHELL, Comptroller, Pittsburgh Railways, Pittsburgh, Pa. (President Accountants' Association); L. P. CRECELIUS, Electrical Engineer, The Cleveland Railway Co. (President Engineering Association); WILLIAM TICHENOR, Claim Agent, Terre Haute, Indianapolis & Eastern Traction Co., Indianapolis, Ind. (President Claims Association); M. C. BRUSH, Second Vice-President, Boston Elevated Railway Co. (President Transportation and Traffic Association).

ACCOUNTANTS' ASSOCIATION

PRESIDENT—C. S. MITCHELL, Comptroller, Pittsburgh Railways Co., Pittsburgh, Pa.

FIRST VICE-PRESIDENT—T. P. KILFOYLE, Auditor, The Cleveland Railway Co., Cleveland, O.

SECOND VICE-PRESIDENT—F. J. PRYOR, JR., Comptroller, The American Railways Co., Philadelphia, Pa.

THIRD VICE-PRESIDENT—H. A. CULLODEN, Secretary and Auditor, Pacific Electric Railway Co., Los Angeles, Cal.

SECRETARY-TREASURER—M. R. BOYLAN, General Auditor, Public Service Railway Co., Newark, N. J.

EXECUTIVE COMMITTEE—Officers and W. G. NICHOLSON, Secretary and Auditor, Omaha & Council Bluffs Street Railway Co., Omaha, Neb.; L. T. HIXSON, Auditor, Terre Haute, Indianapolis & Eastern Traction Co., Indianapolis, Ind.; J. C. COLLINS, Secretary and General Auditor, New York State Railways, Rochester, N. Y.; F. E. WEBSTER, Treasurer, Massachusetts Northeastern Street Railway Co., Haverhill, Mass.

ENGINEERING ASSOCIATION

PRESIDENT—L. P. CRECELIUS, Electrical Engineer, The Cleveland Railway Co., Cleveland, O.

FIRST VICE-PRESIDENT—JOHN LINDALL, Superintendent Rolling Stock and Shops, Boston Elevated Railway Co., Boston, Mass.

SECOND VICE-PRESIDENT—B. F. WOOD, Vice-President and Chief Engineer, United Gas & Electric Engineering Corporation, New York, N. Y.

THIRD VICE-PRESIDENT—F. R. PHILLIPS, Superintendent of Equipment, Pittsburgh Railways Co., Pittsburgh, Pa.

SECRETARY-TREASURER—E. B. BURRITT, 8 West 40th street, New York, N. Y.

EXECUTIVE COMMITTEE—Officers and H. F. MERKER, Engineer Maintenance of Way, East St. Louis & Suburban Railway Co., East St. Louis, Ill.; J. P. BARNES, General Manager, Buffalo, Lockport & Rochester Railway Co., Rochester, N. Y.; G. W. PALMER, JR., Electrical Engineer, Bay State Street Railway Co., Boston, Mass.; W. G. GOVE, Superintendent of Equipment, Brooklyn Rapid Transit System, Brooklyn, N. Y.

CLAIMS ASSOCIATION

PRESIDENT—WILLIAM TICHENOR, Claim Agent, Terre Haute, Indianapolis & Eastern Traction Co., Indianapolis, Ind.

FIRST VICE-PRESIDENT—GEORGE CARSON, Claim Agent, Puget Sound Traction, Light & Power Co., Seattle, Wash.

SECOND VICE-PRESIDENT—R. E. MACDOUGALL, Claim Agent, New York State Railways, Rochester, N. Y.

THIRD VICE-PRESIDENT—S. B. HARE, Claim Agent, Altoona & Logan Valley Electric Railway Co., Altoona, Pa.

SECRETARY-TREASURER—B. B. DAVIS, Claim Adjuster, The Columbus Railway & Light Co., Columbus, O.

EXECUTIVE COMMITTEE—Officers and PETER C. NICKEL, Claim Agent, The New York Railways Co., New York, N. Y.; F. J. WHITEHEAD, Manager Claims Department, Washington Railway & Electric Co., Washington, D. C.; C. B. PROCTOR, Claim Agent, The Memphis Street Railway Co., Memphis, Tenn.; WALLACE MUIR, Claim Agent, Kentucky Traction & Terminal Co., Lexington, Ky.

TRANSPORTATION AND TRAFFIC ASSOCIATION

PRESIDENT—M. C. BRUSH, Second Vice-President, Boston Elevated Railway Co., Boston, Mass.

FIRST VICE-PRESIDENT—H. A. NICHOLL, General Manager, Union Traction Company of Indiana, Anderson, Ind.

SECOND VICE-PRESIDENT—L. C. BRADLEY, Assistant District Manager, Stone & Webster Companies, Texas District, Dallas, Tex.

THIRD VICE-PRESIDENT—R. E. DANFORTH, General Manager, Public Service Railway Co., Newark, N. J.

SECRETARY-TREASURER—E. B. BURRITT, 8 West 40th street, New York, N. Y.

EXECUTIVE COMMITTEE—Officers and J. K. CHOATE, Vice-President, J. G. White Management Corporation, New York, N. Y.; GEORGE H. HARRIS, General Superintendent, San Francisco-Oakland Terminal Railways, Oakland, Cal.; T. C. CHERRY, General Manager, Maryland Electric Railways, Annapolis, Md.; C. D. EMMONS, General Manager, Chicago, South Bend & Northern Indiana Railway Co., South Bend, Ind.

OFFICERS AND MEMBERS OF EXECUTIVE COMMITTEES OF THE AMERICAN ELECTRIC RAILWAY ASSOCIATION AND ITS AFFILIATED ASSOCIATIONS AND THE PREDECESSORS OF EACH SINCE THEIR ORIGINAL ORGANIZATION

ABBREVIATIONS

P.—President.
V. P.—Vice-President.
S.—Secretary.
S.-T.—Secretary-Treasurer.
Chmn.—Chairman.
E. C.—Executive Committee.
A. S. R. A.—American Street Railway Association.
A. S. I. R. A.—American Street and Interurban Railway Association.
A. E. R. A.—American Electric Railway Association.
S. R. A. A.—Street Railway Accountants' Association of America.
A. S. I. R. A. A.—American Street and Interurban Railway Accountants' Association.
A. E. R. A. A.—American Electric Railway Accountants' Association.
A. R. M. E. A.—American Railway Mechanical and Electrical Association.

A. S. I. R. E. A.—American Street and Interurban Railway Engineering Association.
A. E. R. E. A.—American Electric Railway Engineering Association.
S. R. C. A. A.—Street Railway Claim Agents' Association of America.
A. S. I. R. C. A. A.—American Street and Interurban Claim Agents Association.
A. E. R. C. A. A.—American Electric Railway Claim Agents Association.
A. E. R. C. A.—American Electric Railway Claims Association.
A. S. I. R. T. T. A.—American Street and Interurban Railway Transportation and Traffic Association.
A. E. R. T. T. A.—American Electric Railway Transportation and Traffic Association.

A

ACKERMAN, E. O., *E. C.* 1907-8, 1908-9, *A. S. I. R. E. A.*; 2 *V. P.* 1909-10, *A. S. I. R. E. A.*; 1 *V. P.* *A. E. R. E. A.*, 1910-11; *E. C. A. E. R. A.*, 1911-12; *P. A. E. R. E. A.*, 1911-12.
ACKLEY, THOS. W., *E. C.* 1885-6, *P.* 1886-7, *E. C.* 1887-8, *A. S. R. A.*
ADAMS, H. H., *E. C.* 1903, 1904-5, 1 *V. P.* 1904-5, *A. R. M. E. A.*; *E. C. A. S. I. R. A.*, 1905-6; *P. A. S. I. R. E. A.*, 1905-6; *E. C. A. S. I. R. A.*, 1906-7; *P. A. S. I. R. E. A.* 1906-7.
ADKINS, JAMES, *E. C. A. E. R. A.* A., 1911-12.

ALLEN, C. LOOMIS, *E. C. A. S. I. R. A.*, 1907-8; *P. A. S. I. R. T. T. A.*, 1908; *E. C. A. S. I. R. A.*, 1908-9; *P. A. S. I. R. T. T. A.*, 1908-9; 3 *V. P.* 1911-12, 2 *V. P.* 1912-13, 1 *V. P.* 1913-14, *P.* 1914-15, *A. E. R. A.*
ARKWRIGHT, P. S., 3 *V. P.* *A. S. R. A.*, 1902-3.
AVANT, C. A., 2 *V. P.* 1910-11, 1 *V. P.* 1911-12, *A. E. R. C. A.* A.; *E. C. A. E. R. A.* 1912-13; *P. A. E. R. C. A.*, 1912-13.

B

BABCOCK, H. E., *E. C. S. R. A. A. A.*, 1898-9.
BAKER, C. F., 3 *V. P.* 1903, 2 *V. P.* 1903-4, *P.* 1904-5, *A. R. M. E. A.*

- BARNES, J. P., *E. C.* 1913-14, 1914-15, *A. E. R. E. A.*
- BARTLETT, D. DANA, *E. C.* 1901-2, 2 *V. P.* 1902-3, *S. R. A. A. A.*
- BAUMHOFF, GEO. W., *E. C. A. S. R. A.*, 1900-1.
- BEAN, W. WORTH, *E. C.* 1891-2, 3 *V. P.* 1892-3, 1 *V. P.* 1894-5, *A. S. R. A.*
- BEAVIS, C. B., 3 *V. P. S. R. A. A.* *A.* 1897.
- BEELER, JOHN A., 4 *V. P.* 1912-13, 3 *V. P.* 1913-14, 2 *V. P.*, 1914-15, *A. E. R. A.*
- BEGGS, JOHN I., *E. C.* 1898-9; 2 *V. P.* 1904-5, *A. S. R. A.*; 1 *V. P.* 1905-6, *P.* 1906-7, *A. S. I. R. A.*
- BENNETT, H. K., 3 *V. P. A. S. I. R. C. A. A.*, 1909-10; 1 *V. P. A. E. R. C. A. A.*, 1910-11; *E. C. A. E. R. A.*, 1911-12; *P.* *A. E. R. C. A.*, 1911-12.
- BLACK, CHAS. N., 4 *V. P.*; 1908-9, 1909-10, *A. S. I. R. A.*; 3 *V. P.* 1910-11, 2 *V. P.* 1911-12, 1 *V. P.* 1912-13, *P.* 1913-14, *A. E. R. A.*
- BOLEN, N. W., *E. C.* 1908, 1908-9, 2 *V. P.* 1909-10, *A. S. I. R. T. A.*
- BOYLAN, M. R., 1 *V. P.* 1910-11, *S.-T.* 1912-13, *S.-T.* 1913-14, 1914-15, *A. E. R. A. A.*
- BOYLE, S. G., *E. C. S. R. A. A. A.*, 1903-4.
- BRADFORD, H. P., *E. C. A. S. R. A.* 1896-7.
- BRADLEY, HENRY C., 2 *V. P. A. S. I. R. C. A. A.*, 1905-6; *E. C. A. S. I. R. A.*, 1906-7; 1 *V. P.* Oct. 1906-Jan. 1907, *Acting P.* Jan. 1907-Oct. 1907, *A. S. I. R. C. A. A.*
- BRAMEY, L. C., *E. C.* 1912-13; 3 *V. P.* 1913-14, 2 *V. P.* 1914-15, *A. E. R. T. T. A.*
- BRADY, ARTHUR W., 3 *V. P.* 1906-7, 2 *V. P.* 1907-8, 1 *V. P.* 1908-9 and 1909-10, *A. S. I. R. A.*; *P. A. E. R. A.*, 1910-11.
- BROCKWAY, W. B., *S. Organization Meeting*, 1897, *S.-T.* 1897-1904, *S. R. A. A. A.*; *E. C. A. S. I. R. A.*, 1905-6; *P. A. S. I. R. A. A.*, 1905-6; *E. C. A. S. I. R. A. A.*, 1906-7.
- BROWN, J. Q., *E. C. A. E. R. E. A.*, 1912-13.
- BROWN, J. W., *E. C. A. S. I. R. T. T. A.*, 1909-10.
- BROWNE, WILL, 2 *V. P. A. E. R. A. A.*, 1910-11.
- BRUSH, M. C., 3 *V. P.* 1911-12, 2 *V. P.* 1912-13, 1 *V. P.* 1913-14 (six months), *Actg. P.* 1913-14 (six months), *P.* 1914-15, *A. E. R. T. T. A.*; *E. C.* 1913-14 (six months), 1914-15, *A. E. R. A.*
- BUCHANAN, C. B., *E. C.* 1911-12, 1912-13, *A. E. R. T. T. A.*
- BUNN, N. T., *E. C. A. S. I. R. A. A.* 1906-7.
- BURDICK, E. J., *E. C.* 1910-11, 1911-12, *A. E. R. E. A.*
- BURINGTON, P. V., 2 *V. P. S. R. A. A. A.*, 1897-8.
- BURRITT, E. B., *S.-T.* 1913-14, 1914-15, *A. E. R. A.*; *S.-T.* 1913-14, 1914-15, *A. E. R. E. A.*; *S.-T.* 1913-14, 1914-15, *A. E. R. T. T. A.*
- BURROUGHS, W. H., *E. C. A. S. I. R. A. A.*, 1908-9.
- BUSHNELL, FRED N., *E. C.* 1905-6, 1906-7, *A. S. I. R. E. A.*

C

- CALDERWOOD, J. F., 2 *V. P.* 1897; *P.* 1898-9, *E. C.* 1899-1900, *S. R. A. A. A.*
- CAMERON, BRUCE, *E. C.* 1913-14, *A. E. R. T. T. A.*
- CARPENTER, E. C., *E. C.* 1906-7, 1907-8, 1 *V. P.* 1908-9, *A. S. I. R. C. A. A.*; *E. C. A. S. I. R. A.*, 1909-10; *P. A. S. I. R. C. E. A.*, 1909-10.
- CARSON, GEO., *E. C. A. E. R. C. A. A.*, 1911-12; 3 *V. P.* 1912-13, 2 *V. P.* 1913-14, 1 *V. P.* 1914-15, *A. E. R. C. A.*
- CARVER, D. F., *E. C.* 1903, 1903-4, 1904-5, *A. R. M. E. A.*
- CHAPMAN, JAMES R., *E. C.* 1892-3, 2 *V. P.* 1893-4, *A. S. R. A.*
- CHARLTON, BENJ. E., *E. C. A. S. R. A.*, 1802-3.
- CHERRY, T. C., *E. C.* 1914-15, *A. E. R. T. T. A.*
- CHOATE, J. K., *E. C.* 1913-14, 1914-15, *A. E. R. T. T. A.*
- CLARK, ALFRED G., 1 *V. P. A. S. R. A.*, 1886-7.

- CLARK, ROBT. J., E. C. A. E. R. A. A., 1912-13.
 CLARKE, R. J., E. C. A. S. I. R. A. A., 1908-9.
 CLEGG, CHAS. B., S. Organization Meeting, 1882, 3 *V. P.* 1887-8, A. S. R. A.
 CLÉMINSHAW, CHAS., E. C. A. S. R. A. 1882-3.
 COLLINS, J. C., E. C. 1914-15, A. E. R. A. A.
 COLVIN, ADDISON B., E. C. A. S. R. A., 1903-4.
 CONNETTE, E. G., 3 *V. P.* A. S. R. A., 1897-8.
 COOPER, S. C., 3 *V. P.* S. R. A. A. A., 1901-2.
 CORNING, JOHN W., S.-T. 1907-10, A. S. I. R. E. A.
 CRECELIUS, L. P., 2 *V. P.* 1911-12, 1 *V. P.* 1912-13, 1 *V. P.* 1913-14, P. 1914-15, A. E. R. E. A.; E. C., 1914-15, A. E. R. A.
 CRIMMINS, JOHN D., E. C. A. S. R. A., 1892-3.
 CULLODEN, H. A., 3 *V. P.* 1914-15, A. E. R. A. A.
 CUMMINGS, PRENTISS, 3 *V. P.* 1886-7, E. C. 1895-6, A. S. R. A.
 CUNNINGHAM, GRANVILLE C., E. C. 1894-5, 1 *V. P.* 1895-6, A. S. R. A.
 CUNNINGHAM, JOHN N., 2 *V. P.* A. S. R. A., 1894-5.
- D**
- DABNEY, F., E. C. 1905-6, 3 *V. P.* 1908-9, A. S. I. R. A. A.
 DANFORTH, R. E., E. C. 1913-14, 3 *V. P.* 1914-15, A. E. R. T. A.
 DAVIES, H. J., E. C. 1897-8, P. 1902-3, E. C. 1903-4, S. R. A. A. A.
 DAVIS, B. B., S.-T. S. R. C. A. A., 1904; S.-T. A. S. I. R. C. A. A. 1905-10; S.-T. 1910-11, 1911-12, A. E. R. C. A. A.; S.-T. 1912-13, 1913-14, 1914-15, A. E. R. C. A. A.
 DAVIS, H. A., E. C. 1908, E. C. 1908-9, A. S. I. R. T. T. A.
 DIBBS, W. A., P. S. R. C. A. A. A., 1904.
 DICKINSON, GEO. W., E. C. A. S. R. A., 1901-2.
 DIMMOCK, W. S., E. C. S. R. A. A. A., 1897.
 DONECKER, H. C., S.-T. A. S. I. R. A., 1909-10; S.-T. A. E. R. A., 1910-13; S.-T. A. S. I. R. T. T. A., 1909-10; S.-T. A. E. R. T. T. A., 1910-13; S.-T. A. E. R. E. A., 1912-13.
 DOUGAN, W. T., E. C. August to October 1906, E. C. 1906-7, A. S. I. R. E. A.
 DOYLE, J. S., E. C. A. R. M. E. A., 1904-5; 2 *V. P.* 1905-6, 1906-7, 3 *V. P.* 1909-10, A. S. I. R. E. A.; 2 *V. P.* A. E. R. E. A., 1910-11.
 DROWN, H. V., E. C. 1905-6, 1908-9, 1909-10, A. S. I. R. C. A. A.; E. C. A. E. R. A., 1910-11; P. A. E. R. C. A. A., 1910-11.
 DUFFY, C. N., 1 *V. P.* 1897, P. 1899-1900, E. C. 1900-1, S. R. A. A. A.
 DU PONT, B., E. C. A. S. R. A., 1884-5.
 DURBIN, CHAS. K., E. C. A. S. R. A., 1899-1900.
 DYER, D. B., 2 *V. P.* 1896-7, E. C. 1901-2, A. S. R. A.
- E**
- ELLIOTT, THOS., E. C. A. S. I. R. E. A., 1909-10.
 ELY, W. CARYL, 1 *V. P.* 1897-8, 1 *V. P.* 1902-3, P. 1903-4, 1904-5, A. S. R. A.; P. A. S. I. R. A., 1905-6; *Chmn.* Organization Meeting A. S. I. R. T. T. A., 1908.
 EMMONS, C. D., E. C., 1910-11, 1914-15, A. E. R. T. T. A.
 EPPLEY, FRANCIS M., E. C. A. S. R. A., 1889-90.
 EVANS, W. H., 3 *V. P.* 1907-8, 2 *V. P.* 1908-9, A. S. I. R. E. A.
 EVERETT, A., E. C. 1886-7, 1 *V. P.* 1892-3, A. S. R. A.
- F**
- FARMER, THOS., P. A. R. M. E. A., 1903.
 FARRELL, ANDREW J., 3 *V. P.* 1905-6, 2 *V. P.* 1906-7, 1 *V. P.* 1907-8, A. S. I. R. C. A. A.
 FEENEY, J. P., E. C. S. R. C. A. A. A., 1904.

- FERRANDOU, H. A., 3 *V. P. A. S. I. R. A. A.*, 1905-6.
 FLEMING, H. B., *E. C. A. S. I. R. A. A.*, 1906-7.
 FORD, A. H., 3 *V. P. S. R. A. A.*, 1897-8.
 FORSE, W. H., JR., 2 *V. P. A. S. I. R. A. A.*, 1907-8; *E. C. A. E. R. A.*, 1910-11; *P. A. E. R. A. A.*, 1910-11.
 FOSTER, ELWIN C., 2 *V. P.* 1901-2, 1 *V. P.* 1903-4, 1904-5, *A. S. R. A.*
 FRASER, J. D., *E. C. S. R. A. A.*, 1898-9.
 FRAYSER, R. DUDLEY, 2 *V. P. A. S. R. A.*, 1887-8.
 FULLER, FRANK L., *E. C. A. S. R. A.*, 1900-1.
 FULLERTON, IRWIN, *E. C.* 1901-2, 1 *V. P.* 1902-3, *S. R. A. A. A.*

G

 GABOURY, A., *E. C.* 1910-11, 1911-12, *A. E. R. T. T. A.*
 GAULT, E. D., *E. C. A. E. R. A. A.*, 1911-12.
 GIDNEY, HERBERT A., *E. C.* 1913-14, *A. E. R. A. A.*
 GLENDENING, J. W., *E. C. A. E. R. T. T. A.*, 1910-11.
 GLOVER, M. W., *E. C.* 1911-12, 1 *V. P.* 1912-13, *P.* 1913-14, *A. E. R. A. A.*; *E. C.* 1913-14, *A. E. R. A.*
 GOFF, ROBT. S., *E. C. A. S. R. A.*, 1897-8.
 GOODRICH, C. G., *E. C.* 1895-6, 1904-5, *A. S. R. A.*; 2 *V. P.* 1905-6, 1 *V. P.* 1906-7, *P.* 1907-8, *A. S. I. R. A.*
 GOODRICH, E. S., *E. C. A. S. R. A.*, 1893-4.
 GOSHORN, H. R., *E. C. A. S. I. R. A.*, 1907-8; *P. A. S. I. R. C. A. A.* 1907-8.
 GOVE, W. G., *E. C.* 1914-15, *A. E. R. E. A.*
 GRAHAM, JOHN R., *E. C.* 1899-1900, 1900-01, *A. S. R. A.*
 GRANT, HOWARD F., *E. C. A. S. R. A.* 1904-5.
 GRANT, JOHN, 2 *V. P. A. S. R. A.*, 1903-4.
 GREEN, ALFRED, 2 *V. P.* 1903, 1 *V. P.* 1903-4, *A. R. M. E. A.*
 GREEN, CHAS., *E. C. A. S. R. A.*, 1887-8.
 GREENE, F. R., *E. C. S. R. A. A. A.*, 1897-8.
 GRIFFIN, W. R. W., *E. C. A. E. R. T. T. A.*, 1912-13.

H

 HALL, M. W., *Chmn. Organization Meeting S. R. A. A. A.*, 1897.
 HAM, W. F., *E. C.* 1897-8, 1 *V. P.* 1899-1900, *P.* 1900-1, *E. C.* 1901-2, *S. R. A. A. A.*
 HAMILTON, D. G., *E. C. A. S. R. A.*, 1894-5.
 HANDLON, J. H., 2 *V. P. A. S. I. R. C. A. A.*, 1909-10; *E. C. A. E. R. C. A. A.*, 1910-11.
 HANDSHY, C. F., *E. C. A. E. R. T. T. A.*, 1911-12.
 HANNA, J. H., *E. C.* 1911-12, 3 *V. P.* 1912-13, *P.* 1913-14, *A. E. R. E. A.*; *E. C.* 1913-14, *A. E. R. A.*
 HARDER, J. A., 1 *V. P. A. S. R. A. A. A.*, 1900-1.
 HARDIN, CHAS. B., *E. C.* 1906-7, 1907-8, *A. S. I. R. C. A. A.*; *E. C. A. S. I. R. A.* 1908-9; *P. A. S. I. R. C. A. A.*, 1908-9.
 HARE, S. B., *E. C.* 1913-14, 3 *V. P.* 1914-15, *A. E. R. C. A.*
 HARRAH, CHAS. J., *E. C. A. S. R. A.*, 1884-5.
 HARRIES, GEO. H., 3 *V. P.* 1908-9, 1909-10, *A. S. I. R. A.*; 2 *V. P.* 1910-11, 1 *V. P.* 1911-12, *P.* 1912-13, *A. E. R. A.*
 HARRINGTON, WALTER E., *E. C. A. S. R. A.*, 1904-5.
 HARRIS, GEO. H., *E. C.* 1914-15, *A. E. R. T. T. A.*
 HARRIS, JOHN, *E. C. A. S. R. A.*, 1900-1.
 HARRISON, J. S., 3 *V. P.* 1907-8, 2 *V. P.* 1908-9, 1 *V. P.* 1909-10, *A. S. I. R. C. A. A.*
 HARRISON, RUSSELL B., 3 *V. P. A. S. R. A.*, 1894-5.
 HARVIE, W. J., *E. C.* 1907-8, 3 *V. P.* 1908-9, *A. S. I. R. E. A.*; *E. C. A. S. I. R. A.*, 1909-10; 1 *V. P.* October 1909 to July 1910, *Acting P.* July to October 1910, *A. S. I. R. E. A.*; *E. C. A. E. R. A.*, 1910-11; *P. A. E. R. E. A.*, 1910-11.

HAZZARD, WM. H., 1 *V. P.* 1882-
P. 1883-4, *E. C.* 1884-5, *A. S.*
R. A.
 HEATON, WALTER S., 3 *V. P.* *A. E.*
R. C. A. A., 1910-11.
 HEFT, N. H., 2 *V. P.* *A. S. R. A.*,
 1900-01.
 HEGARTY, D. A., 2 *V. P.* 1911-12,
 1 *V. P.* 1912-13, *P.* 1913-14 (six
 months), *A. E. R. T. T. A.*;
E. C. 1913-14 (six months), *A.*
E. R. A.
 HEMINWAY, C. M., *E. C. S. R. A.*
A. A., 1900-01.
 HENRY, C. L., 4 *V. P.* 1911-12,
 3 *V. P.* 1912-13, 2 *V. P.* 1913-
 14, 1 *V. P.* 1914-15, *A. E. R. A.*
 HENRY, DAVID F., *E. C. A. S.*
R. A., 1890-1.
 HENRY, F. R., *E. C.* 1901-2, 1
V. P. 1903-4, 1904-5, *S. R. A.*
A. A.; 2 *V. P.* 1906-7, *P.* Oc-
 tober 1907 to February 1908,
A. S. I. R. A. A.
 HIBBS, E. D., 1 *V. P.* *S. R. A.*
A. A., 1897-8.
 HIPPEE, GEO. B., *E. C. A. S. R. A.*,
 1896-7.
 HIELD, WILLARD J., *E. C. A. S.*
R. A., 1902-3.
 HILL, NICHOLAS S., *E. C. A. S.*
R. A., 1899-1900.
 HIXSON, L. T., *E. C.* 1910-11, 1
V. P. 1911-12, *E. C.* 1914-15,
A. E. R. A. A.
 HOFFMAN, O. M., *E. C. S. R. A.*
A. A., 1902-3.
 HOGARTH, J. B., 3 *V. P.* *S. R. A.*
A. A., 1902-3.
 HOLMES, CHAS. B., 2 *V. P.* 1885-
 6 *P.* 1887-8, *E. C.* 1888-9, *A. S.*
R. A.
 HOLMES, C. F., 3 *V. P.* *A. S. R.*
A., 1896-7.
 HOLMES, JOHN G., *E. C.* 1883-4,
P. 1891-2, *E. C.* 1892-3, *A. S.*
R. A.
 HOLMES, WALTON 'H., 3 *V. P.*
 1898-9, *P.* 1900-01, *E. C.* 1901-
 2, *A. S. R. A.*
 HURT, HENRY, *E. C.* 1886-7, 2
V. P. 1888-9, *A. S. R. A.*
 HURT, JOEL, 2 *V. P.* 1892-3, *P.*
 1894-5, *E. C.* 1895-6, *A. S. R. A.*
 HUTCHINS, JERE C., *P.* 1902-3, *E.*
C. 1903-4, *A. S. R. A.*

J

JACKSON, WM. H., *E. C.* 1894-5,
 2 *V. P.* 1895-6, *A. S. R. A.*
 JOHNSON, F. W., *E. C. A. S. I. R.*
C. A. A., 1906-7.
 JOHNSTON, JAMES H., *E. C. A. S.*
R. A., 1888-9.
 JONES, FRANK G., *E. C.* 1898-9,
 3 *V. P.* 1899-1900, *E. C.* 1904-5,
A. S. R. A.

K

KALWEIT, G. W., 2 *V. P.* *A. E. R.*
A. A., 1912-13.
 KAYSER, A. H., 2 *V. P.* 1913-14,
A. E. R. A. A.
 KEEFER, THOS. C., *E. C. A. S.*
R. A., 1890-1.
 KEHL, W. J., *E. C. A. S. I. R.*
A. A., 1908-9.
 KELLY, W. F., *E. C. A. S. R. A.*,
 1895-6.
 KELSAY, G. H., *E. C. A. E. R.*
E. A., 1910-11.
 KERPER, GEO. B., 3 *V. P.* 1882-3,
 2 *V. P.* 1883-4, *P.* 1888-9, *E. C.*
 1889-90, *A. S. R. A.*
 KIELY, GEO. W., *E. C. A. S. R. A.*,
 1889-90.
 KILFOYLE, THOS. P., *E. C. A. E.*
R. A. A., 1912-13, 1 *V. P.* 1913-
 14, 1914-15.
 KILGOUR, JOHN, *E. C. A. S. R. A.*,
 1885-6.

L

LAFFIN, RICHARD T., *E. C. A. S.*
R. A., 1902-3.
 LAHR, C. H., *E. C. A. S. I. R.*
A. A., 1908-9; *E. C. A. E. R.*
A. A., 1910-11.
 LAKE, H. J., *E. C. A. R. M. E. A.*,
 1903-4.
 LAKE, JAMES K., *E. C.* 1882-3, 1
V. P. 1883-4, *E. C.* 1884-5, *A. S.*
R. A.
 LANG, ALBION E., 3 *V. P.* 1891-2,
P. 1897-8, *E. C.* 1898-9, *A. S.*
R. A.
 LASHER, F. B., *E. C.* 1910-11, 3
V. P. 1912-13, *A. E. R. A. A.*
 LAWLESS, EDW. J., *E. C. A. S.*
R. A., 1888-9.
 LEARNED, C. E., 2 *V. P.* *A. E. R.*
T. T. A., 1910-11.
 LESTER, J. W., 3 *V. P.* *S. R. A.*
A. A., 1904-5.

- LEWIS, C. C., *E. C. A. R. M.*
E. A., 1904-5.
- LEWIS, DANIEL F., *E. C. A. S.*
R. A., 1887-8.
- LINCOLN, F. H., *E. C.* 1906-7, 2
V. P. 1907-8, 1 *V. P.* 1908-9, *P.*
October 1909 to July 1910, *A. S.*
I. R. E. A.
- LINDALL, JOHN, *E. C. A. S. I. R.*
E. A., 1909-10; *E. C.* 1910-11,
3 *V. P.* 1911-12, 2 *V. P.* 1912-13,
2 *V. P.* 1913-14, 1 *V. P.* 1914-15,
A. E. R. E. A.
- LINN, A. L., JR., *E. C. S. R. A.*
A. A., 1904-5; *E. C.* 1907-8, 1
V. P. 1909-10, A. S. I. R. A. A.
- LITCHFIELD, NORMAN, *S.-T.* 1910-
11, 1911-12, *E. C.* 1912-13, *E. C.*
1913-14, A. E. R. E. A.
- LITTELL, H. H., *P.* 1882-3, *E. C.*
1883-4, A. S. R. A.
- LITTELL, HARVEY M., *E. C.* 1890-
1, *P.* 1895-6, *E. C.* 1896-7, A. S.
R. A.
- LITTLE, SAMUEL, 3 *V. P. A. S.*
R. A., 1885-6.
- LONGSTREET, DANIEL F., *E. C.*
1882-3, 3 *V. P.* 1883-4, *P.* 1892-
3, *E. C.* 1893-4, A. S. R. A.
- LONGYEAR, W. B., 2 *V. P. S. R. A.*
A. A., 1901-2.
- LOWRY, THOS., *E. C.* 1882-3, *P.*
1889-90, *E. C.* 1890-1, A. S.
R. A.
- LUSHER, EDW., 3 *V. P. A. S. R. A.*,
1884-5.
- M**
- McALONEY, W. H., *E. C. A. E.*
R. M. A., October 1904 to Feb-
ruary 1905; *E. C. A. S. I. R.*
E. A., 1909-10.
- MCCARTER, THOS. N., 3 *V. P.*
1907-8, 2 *V. P.* 1908-9, 2 *V. P.*
1909-10, A. S. I. R. A.; 1 *V. P.*
1910-11, *P.* 1911-12, A. E. R. A.
- MCCCLARY, JOHN B., 3 *V. P. A. S.*
R. A., 1900-01.
- MCCORMACK, IRA, *E. C. A. S. R.*
A., 1898-9.
- MCCULLOCH, RICHARD, 3 *V. P.*
A. S. R. A., 1904-5.
- MCCULLOCH, ROBT., 3 *V. P.* 1889-
90, *P.* 1896-7, *E. C.* 1897-8, A. S.
R. A.
- McDOLE, W. G., 3 *V. P. S. R. A.*
A. A., 1900-01.
- McLEAN, THOS. H., 1 *V. P.* 1891-
2; *E. C.* 1893-4, A. S. R. A.
- McMILLAN, J., *E. C. A. E. R. T.*
T. A., 1912-13.
- McQUILKIN, ISAAC, 2 *V. P. S. R.*
A. A. A., 1904-5.
- MACDOUGALL, R. E., *E. C. A. E.*
R. C. A. A., 1911-12; *E. C.*
1912-13, 3 *V. P.* 1913-14, 2 *V.*
P. 1914-15, A. E. R. C. A.
- MACKAY, A. H., *E. C. A. S. I. R.*
T. T. A., 1909-10.
- MACKAY, H. C., *E. C.* 1898-9, *P.*
1901-2, *E. C.* 1902-3, S. R. A.
A. A.
- MAGILTON, J. J., *E. C.* 1902-3, 3
V. P. 1903-4, S. R. A. A.
- MAGUIRE, JOHN, *E. C.* 1883-6, A.
S. R. A.
- MARKLE, A., *E. C. A. S. R. A.*,
1895-6.
- MARTIN, WM. H., 3 *V. P. A. S.*
R. A., 1888-9.
- MERKER, H. F., *E. C.* 1913-14,
1914-15, A. E. R. E. A.
- MERRILL, MOODY, *Chmn.* Organiza-
tion Meeting A. S. R. A., 1882.
- METCALF, JESSE, 1 *V. P. A. S.*
R. A., 1888-9.
- MICHENER, A. S., 2 *V. P. A. S. I.*
R. A. A., 1909-10.
- MILLAR, JOHN, 2 *V. P. A. R. M.*
E. A., 1904-5.
- MINARY, THOS. J., *E. C. A. S.*
R. A., 1892-3.
- MITCHELL, C. S., *E. C. S. R. A.*
A. A., 1900-01; *E. C. A. S. I. R.*
A. A., 1909-10, 3 *V. P.* 1913-14,
P. 1914-15, A. E. R. A. A.;
E. C., 1914-15, A. E. R. A.
- MOFFITT, PIERRE C., *E. C. A. S.*
R. E., 1883-4.
- MONKS, FRANK H., *E. C. A. S.*
R. A., 1889-90.
- MOORE, HENRY C., *E. C.* 1897-8,
1 *V. P.* 1898-9, A. S. R. A.
- MORGAN, J. WILLARD, 3 *V. P. A.*
S. R. A., 1895-6.
- MORRISON, ROBT., JR., *E. C. A. S.*
I. R. A. A., 1909-10; *E. C. A. E.*
R. A. A., 1911-12.
- MOSHER, EDWARD G., *E. C. A. S.*
R. A., 1887-8.
- MOWER, S. W., *S.-T.* 1903-5, A. R.
M. E. A.; *S.-T.* 1905-7, A. S.
I. R. E. A.
- MUIR, WALLACE, *E. C.* 1914-15, A.
E. R. C. A.

MULLEN, T. J., *E. C.* 1903, 1903-4,
A. R. M. E. A.
MULLETT, H. A., *E. C. A. E. R.*
E. A., 1911-12.
MUNDY, W. O., *E. C.* 1903, 3 *V. P.*
1903-4, A. R. M. E. A.
MURPHY, JOHN Z., *E. C.* 1907-8,
A. S. I. R. E. A.

N

NEAL, J. H., 1 *V. P. A. S. I. R.*
A. A., 1906-7; *E. C.* 1912-13,
A. E. R. A.; *P. A. E. R. A. A.*,
1912-13.
NELSON, S. L., *E. C. A. S. R. A.*,
1903-4.
NICHOLL, H. A., *E. C.* 1911-12, 3
V. P. 1912-13, 2 *V. P.* 1913-14,
1 *V. P.* 1914-15, A. E. R. T.
T. A.
NICHOLL, T. J., *E. C. A. S. R. A.*
1901-02.
NICHOLSON, W. G., *E. C.* 1913-14,
1914-15, A. E. R. A. A.
NICKEL, PETER C., *E. C.* 1906-7,
1907-8, A. S. I. R. C. A. A.;
E. C. 1912-13, *E. C.* 1913-14,
1914-15, A. E. R. C. A.

O

O'CONNER, E. W., *V. P. S. R. C.*
A. A. A., 1904; 1 *V. P. A. S. I.*
R. C. A. A., 1905-6.
ODELL, CHAS., 2 *V. P. A. S. R. A.*,
1890-1.
OLDS, E. W., 1 *V. P.* 1903, *P.*
1903-4, *E. C.* February 1905 to
September 1905, A. R. M. E. A.

P

PAGE, H. C., *E. C.* 1908, 1908-9,
1 *V. P.* 1909-10, A. S. I. R. T.
T. A.; *E. C. A. E. R. A.*, 1910-
11, *P. A. E. R. T. T. A.*, 1910-
11.
PALMER, G. W., JR., *E. C.* 1914-
15, A. E. R. E. A.
PARDEE, J. H., *E. C. A. S. I. R.*
A. A., 1905-6.
PARKER, G. W., *E. C.* 1908, 1908-9,
3 *V. P.* 1909-10, A. S. I. R. T.
T. A.
PARTRIDGE, JOHN N., *E. C. A. S.*
R. A., 1894-5.
PATTERSON, A. R., *E. C. A. S. I.*
R. A. A., 1907-8.

PAYNE, HENRY C., *P.* 1893-4, *E.*
C. 1894-5, A. S. R. A.
PEASE, S. M., *E. C. S. R. A. A. A.*,
1903-4.
PENINGTON, THOS. C., *E. C. A. S.*
R. A., 1891-2; *S.-T. A. S. R. A.*,
1895-1905.
PERRINE, LEWIS, JR., *E. C.* 1891-2,
3 *V. P.* 1893-4, A. S. R. A.
PHILLIPS, F. R., *E. C.* 1912-13,
E. C. 1913-14, 3 *V. P.* 1914-15,
A. E. R. E. A.
PRATT, A. STUART, *E. C. A. S. I.*
R. A. A., 1906-7.
PRATT, JAMES R., *E. C.* 1905-6,
1908-9, 1909-10, A. S. I. R. C.
A. A.; *E. C.* 1910-11, 1911-12,
A. E. R. C. A. A.
PROCTOR, C. B., *E. C.* 1913-14,
1914-15, A. E. R. C. A.
PRYOR, FRANK J., *E. C.* 1910-1911;
2 *V. P.* 1914-15, A. E. R. A. A.

R

RADCLIFFE, GEO. L., 2 *V. P.* 1908,
1908-9, A. S. I. R. T. T. A.
RADEL, ANDREW, *E. C. A. S. R. A.*,
1902-3.
READ, WALTER P., *E. C. A. S.*
R. A., 1902-3.
REED, W. BOARDMAN, *E. C. A. S.*
I. R. E. A., September 1905 to
August 1906.
REICHERT, S. L., 2 *V. P. A. S. I.*
R. A. A., 1908-9.
RENAUD, W. H., *E. C. S. R. C. A.*
A. A., 1904; *E. C.* 1905-6, 1906-
7, A. S. I. R. C. A. A.
REYNOLDS, JOHN J., *E. C. A. S. I.*
R. C. A. A., 1908-9; *E. C. A. E.*
R. C. A. A., 1910-11.
RHOADES, S. L., *P. A. S. I. R. C.*
A. A. 1905-6; *E. C. A. S. I.*
R. A., 1905-6; *P. A. S. I. R. C.*
A. A., October 1906 to January
1907.
RICE, C. G., *E. C. A. E. R. C. A.*,
1912-13.
RICHARDS, CALVIN A., 2 *V. P.*
1882-3, *P.* 1884-5, *E. C.* 1885-6,
A. S. R. A.
RICHARDSON, WM. J., *S.-T. A. S.*
R. A. 1882-1895.
RIGG, JOHN A., 2 *V. P.* 1897-8, 1
V. P. 1899-1900, *E. C.* 1901-2,
A. S. R. A.

ROACH, JOHN M., *E. C.* 1897-8, *P.* 1899-1900, *E. C.* 1900-01, *A. S. R. A.*
 ROBERTS, EUGENE R., *E. C.* 1907-8, 1908-9, 1909-10, *A. S. I. R. C. A. A.*
 ROBERTS, WM., *E. C.* 1907-8, 1908-9, *A. S. I. R. E. A.*
 ROGERS, ANDREW D., 3 *V. P. A. S. R. A.*, 1890-1.
 ROGERS, G. TRACY, *E. C. A. S. R. A.*, 1903-4.
 ROGERS, S. C., *E. C. S. R. A. A. A.* 1903-4; 3 *V. P. A. S. I. R. A. A.*, 1907-8.
 ROSS, W. G., *E. C.* 1897, 2 *V. P.* 1899-1900, *P.* 1904-5, *S. R. A. A. A.*; *E. C. A. S. I. R. A. A.*, 1905-6; 4 *V. P. A. E. R. A.* 1910-11.
 RUGG, JULIUS E., *E. C.* 1883-4, 1 *V. P.* 1887-8, *A. S. R. A.*
 RYAN, F. J., 3 *V. P. A. S. I. R. C. A. A.*, 1908-9.

S

SAGE, HENRY A., *E. C. A. S. R. A.*, 1888-9.
 SCHOENEN, R. H., 2 *V. P. A. E. R. C. A. A.*, 1911-12.
 SCHOEFF, W. KELSEY, 2 *V. P. A. S. R. A.*, 1902-3.
 SCHREIBER, MARTIN, *E. C.* 1908-9, 1909-10, *A. S. I. R. E. A.*; 3 *V. P.* 1910-11, 1 *V. P.* 1911-12, *P.* 1912-13, *A. E. R. E. A.*; *E. C. A. E. R. A.*, 1912-13.
 SCULLIN, HARRY, *E. C. A. S. R. A.*, 1896-7.
 SCULLIN, JOHN, *E. C. A. S. R. A.*, 1888-9.
 SEMMES, RAPHAEL, *E. C. A. S. R. A.*, 1889-90.
 SERGEANT, CHAS. S., 1 *V. P.* 1896-7, *P.* 1898-9, *E. C.* 1899-1900, *A. S. R. A.*
 SHAFFER, JOHN C., 2 *V. P. A. S. R. A.*, 1889-90.
 SHANNAHAN, J. N., *E. C. A. S. I. R. T. T. A.*, 1909-10; 1 *V. P.* 1910-11, *P.* 1911-12, *A. E. R. T. T. A.*; *E. C. A. E. R. A.* 1911-12.
 SHARP, JACOB, *E. C. A. S. R. A.*, 1883-4.

SHAW, JAMES F., 3 *V. P. A. S. R. A.*, 1903-4; 3 *V. P.* 1905-6, 2 *V. P.* 1906-7, 1 *V. P.* 1907-8, *P.* 1908-9, 1909-10, *A. S. I. R. A. A. E. R. A. A.*
 SIMMONS, FRED G., 3 *V. P. A. R. M. E. A.*, 1904-5; 1 *V. P.* 1905-6, 1906-7, *P.* 1907-8, *A. S. I. R. E. A.*; *E. C. A. S. I. R. A.*, 1907-8.
 SIMPSON, C. O., *E. C.* 1899-1900, 1903-4, *S. R. A. A. A.*
 SINCLAIR, WM. H., 2 *V. P. A. S. R. A.*, 1886-7.
 SLOAN, H. M., 3 *V. P. A. S. R. A.*, 1901-2.
 SMITH, CHAS. H., *E. C. A. S. R. A.*, 1896-7.
 SMITH, F. E., 3 *V. P.* 1898-9, *P.* 1903-4, *E. C.* 1904-5, *S. R. A. A. A.*
 SMITH, H. E., 3 *V. P. A. E. R. A. A.*, 1910-11.
 SMITH, J. M., *E. C.* 1897-3, 2 *V. P.* 1900-1, *S. R. A. A. A.*
 SMITH, L. L., *E. C. A. S. I. R. E. A.*, 1908-9.
 SMITH, WM. A., 1 *V. P.* 1890-1, *E. C.* 1903-4, *A. S. R. A.*
 SMITH, WINFIELD, *E. C. A. S. R. A.*, 1887-8.
 SOPER, W. Y., *E. C. A. S. R. A.*, 1893-4.
 SPAULDING, SAMUEL S., *E. C. A. S. R. A.* 1886-7.
 SPEED, JAMES B., 2 *V. P. A. S. R. A.*, 1891-2.
 SPILLANE, M. P., *E. C. A. S. I. R. C. A. A.*, 1909-10.
 STANLEY, JOHN J., *E. C. A. S. R. A.*, 1904-5.
 STEPHENSON, WM. J., 1 *V. P. A. S. R. A.*, 1893-4.
 STEVENS, DANA, *E. C. S. R. A. A. A.*, 1897; *E. C. A. S. I. R. T. T. A.*, 1909-10; 3 *V. P.* 1910-11, 1 *V. P.* 1911-12, *P.* 1912-13, *A. E. R. T. T. A.*; *E. C. A. E. R. A.*, 1912-13.
 STORRS, L. S., 4 *V. P.* 1913-14, 3 *V. P.* 1914-15, *A. E. R. A.*
 STUBBS, N. E., 3 *V. P. A. S. I. R. A. A.*, 1909-10; 3 *V. P. A. E. R. A. A.*, 1911-12.

SWENSON, BERNARD V., S.-T. A. S. I. R. A., 1905-9; S. Organization Meeting A. S. I. R. T. T. A., 1908; S.-T. 1908, 1908-9, A. S. I. R. T. T. A.
 SWIFT, H. S., E. C. 1906-7, 1 V. P. 1908-9, P. 1909-10, A. S. I. R. A. A.; E. C. A. S. I. R. A., 1909-10.
 SULLIVAN, J. V., E. C. A. E. R. T. T. A., 1910-11.

T

THARP, W. J., E. C. A. S. I. R. A. A., 1909-10.
 THORNTON, ALBERT E., E. C. A. S. R. A., 1890-1.
 TICHENOR, WM., E. C. 1910-11, 1911-12, A. E. R. C. A. A.; 2 V. P. 1912-13, 1 V. P. 1913-14, P. 1914-15, A. E. R. C. A.; E. C., 1914-15, A. E. R. A.
 TIGHE, E. R. L., E. C. 1897, 1 V. P. 1898-9, S. R. A. A. A.
 TINGLEY, C. L. S., 1 V. P. S. R. A. A. A., 1901-2; E. C. 1905-6, P. 1906-7, E. C. 1907-8, A. S. I. R. A. A.; E. C. A. S. I. R. A., 1906-7.
 TODD, R. I., 1 V. P. 1908, 1908-9, P. 1909-10, A. S. I. R. T. T. A.; E. C. A. S. I. R. A., 1909-10.
 TRIPP, G. E., E. C. A. S. R. A. A., 1900-01.
 TWINING, W. S., E. C. A. S. I. R. E. A., 1905-6.

V

VERNER, MURRAY A., E. C. A. S. R. A., 1891-2.
 VICKERS, H. D., E. C. 1913-14, A. E. R. A. A.
 VOYNOW, C. B., E. C. A. E. R. E. A., 1910-11.
 VREELAND, HERBERT H., 2 V. P. 1899-1900, 1 V. P. 1900-01, P. 1901-2, E. C. 1902-3, A. S. R. A.

W

WALLIS, ROBT. N., 2 V. P. 1905-6, 1 V. P. October 1907 to February 1908, Acting P. February 1908 to October 1908, P. 1908-9, E. C. 1909-10, A. S. I. R. A. A.; E. C. 1907-8, 1908-9, A. S. I. R. A.

WALSH, E. P., E. C. A. E. R. C. A., 1912-13.
 WALSH, J. S., E. C. 1882-3, 1 V. P. 1884-5, P. 1885-6, E. C. 1886-7, A. S. R. A.
 WARNOCK, A. W., 3 V. P. 1908, 1908-9, A. S. I. R. T. T. A.
 WASON, CHAS. W., E. C. 1899-1900, 1 V. P. 1901-2, A. S. R. A.
 WATSON, HENRY M., 2 V. P. 1884-5, P. 1890-91, E. C. 1891-2, A. S. R. A.
 WEBSTER, F. E., E. C. 1914-15, A. E. R. A. A.
 WEEKS, H. E., E. C. 1907-8, S.-T. 1908-10, A. S. I. R. A. A.; S.-T. 1910-12, A. E. R. A. A.
 WEH, W. F., 3 V. P. 1906-7, 2 V. P. 1907-8, A. S. I. R. C. A. A.; 3 V. P. A. E. R. C. A. A., 1911-12; 1 V. P. 1912-13, P. 1913-14, A. E. R. C. A., E. C. 1912-13, A. E. R. A.
 WELLS, C. B., E. C. 1913-14, A. E. R. T. T. A.
 WHITAKER, EDWARD, E. C. A. S. R. A., 1893-4.
 WHITE, ELMER M., 3 V. P. 1899-1900, E. C. 1902-3, S.-T. 1904-5, S. R. A. A. A.; S.-T. 1905-8, A. S. I. R. A. A.; 2 V. P. A. E. R. A. A., 1911-12.
 WHITE, WM., E. C. S. R. C. A. A. A., 1904.
 WHITE, WM., E. C. 1884-5, 1 V. P. 1885-6, A. S. R. A.
 WHITEHEAD, F. J., E. C. 1913-14, 1914-15, A. E. R. C. A.
 WHITNEY, GEO. G., E. C. A. E. R. A. A., 1912-13.
 WIGHT, C. L., E. C. S. R. A. A. A., 1899-1900; 3 V. P. A. S. I. R. A. A., 1906-7.
 WILKIN, F. E., E. C. A. E. R. A. A., 1912-13.
 WILLCUTT, G. B., E. C. S. R. A. A. A., 1904-5.
 WILLIAMS, R. LANCASTER, 2 V. P. S. R. A. A. A., 1898-9.
 WILLIAMS, T. S., 4 V. P. 1914-15, A. E. R. A.
 WILSON, H. L., P. 1897, 1897-8, E. C. 1898-9, S. R. A. A. A.

WINSOR, PAUL, 3 *V. P.* 1905-6,
1906-7, 1 *V. P.* 1907-8, *P.* 1908-
9, A. S. I. R. E. A.; *E. C. A. S.*
I. R. A., 1908-9.

WOOD, B. F., *E. C.* 1911-12, 1912-
13, 3 *V. P.* 1913-14, 2 *V. P.*,
1914-15, A. E. R. E. A.

WOODRUFF, ERNEST, 2 *V. P.* A. S.
R. A., 1898-9.

WOODWORTH, CHAUNCEY C., S.
Organization Meeting 1882, *E.*
C. 1885-6, A. S. R. A.

WYMAN, C. DENSMORE, *E. C.*
1886-7, 1 *V. P.* 1889-90, *E. C.*
1897-8, A. S. R. A.

Y

YOUNG, P. S., *E. C. S. R. A. A. A.*,
1904-5, 1 *V. P.* A. S. I. R. A. A.,
1905-6, *E. C. A. E. R. A.*, 1911-
12; *P. A. E. R. A. A.*, 1911-12.
YUILLE, GEO. A., *E. C. A. S. R. A.*,
1898-9.

DATES AND LOCATION OF ANNUAL CONVENTIONS OF THE AMERICAN ELECTRIC RAILWAY ASSOCIATION AND ITS AFFILIATED ASSOCIATIONS SINCE THE ORGANIZATION OF EACH

- 1882 — American Street Railway Association (Organization Meeting), Boston, Mass., Dec. 12-13.
- 1883 — American Street Railway Association, Chicago, Ill., Oct. 9-10.
- 1884 — American Street Railway Association, New York, N. Y., Oct. 15-17.
- 1885 — American Street Railway Association, St. Louis, Mo., Oct. 21-23.
- 1886 — American Street Railway Association, Cincinnati, O., Oct. 20-21.
- 1887 — American Street Railway Association, Philadelphia, Pa., Oct. 19-20.
- 1888 — American Street Railway Association, Washington, D. C., Oct. 17-18.
- 1889 — American Street Railway Association, Minneapolis, Minn., Oct. 16-17.
- 1890 — American Street Railway Association, Buffalo, N. Y., Oct. 15-16.
- 1891 — American Street Railway Association, Pittsburgh, Pa., Oct. 21-22.
- 1892 — American Street Railway Association, Cleveland, O., Oct. 19-20.
- 1893 — American Street Railway Association, Milwaukee, Wis., Oct. 18-19.
- 1894 — American Street Railway Association, Atlanta, Ga., Oct. 17-19.
- 1895 — American Street Railway Association, Montreal, Que., Oct. 15-18.
- 1896 — American Street Railway Association, St. Louis, Mo., Oct. 20-23.
- 1897 — Street Railway Accountants Association of America (Organization Meeting), Cleveland, O., March 23-24.
- American Street Railway Association, Niagara Falls, N. Y., Oct. 19-22.
- Street Railway Accountants Association of America, Niagara Falls, N. Y., Oct. 19-22.
- 1898 — American Street Railway Association, Boston, Mass., Sept. 6-9.
- Street Railway Accountants Association of America, Boston, Mass., Sept. 6-9.
- 1899 — American Street Railway Association, Chicago, Ill., Oct. 17-20.
- Street Railway Accountants Association of America, Chicago, Ill., Oct. 17-20.
- 1900 — American Street Railway Association, Kansas City, Mo., Oct. 16-19.
- Street Railway Accountants Association of America, Kansas City, Mo., Oct. 16-19.
- 1901 — American Street Railway Association, New York, N. Y., Oct. 9-11.
- Street Railway Accountants Association of America, New York, N. Y., Oct. 9-11.
- 1902 — American Street Railway Association, Detroit, Mich., Oct. 8-10.
- Street Railway Accountants Association of America, Detroit, Mich., Oct. 8-10.

- 1903 — American Mechanical and Electrical Association (Organization Meeting), Cleveland, O., Feb. 16.
 American Street Railway Association, Saratoga Springs, N. Y., Sept. 2-4.
 Street Railway Accountants Association of America, Saratoga Springs, N. Y., Sept. 2-4.
 American Mechanical and Electrical Association, Saratoga Springs, N. Y., Sept. 1-3.
- 1904 — American Street Railway Association, St. Louis, Mo., Oct. 12-13.
 Street Railway Accountants Association of America, St. Louis, Mo., Oct. 13-15.
 American Mechanical and Electrical Association, St. Louis, Mo., Oct. 10-12.
 Street Railway Claim Agents Association of America (Organization Meeting), St. Louis, Mo., Oct. 12.
- 1905 — American Street and Interurban Railway Association, Philadelphia, Pa., Sept. 27-28.
 American Street and Interurban Railway Accountants Association, Philadelphia, Pa., Sept. 28-29.
 American Street and Interurban Railway Engineering Association, Philadelphia, Pa., Sept. 25-26.
 American Street and Interurban Railway Claim Agents Association, Philadelphia, Pa., Sept. 26.
- 1906 — American Street and Interurban Railway Association, Columbus, O., Oct. 15-19.
 American Street and Interurban Railway Accountants Association, Columbus, O., Oct. 16-18.
 American Street and Interurban Railway Engineering Association, Columbus, O., Oct. 15-17.
 American Street and Interurban Railway Claim Agents Association, Columbus, O., Oct. 15-17.
- 1907 — American Street and Interurban Railway Association, Atlantic City, N. J., Oct. 14-18.
 American Street and Interurban Railway Accountants Association, Atlantic City, N. J., Oct. 15-17.
 American Street and Interurban Railway Engineering Association, Atlantic City, N. J., Oct. 14-16.
 American Street and Interurban Railway Claim Agents Association, Atlantic City, N. J., Oct. 14-16.
- 1908 — American Street and Interurban Railway Transportation and Traffic Association, (Organization Meeting), New York, N. Y., Jan. 30.
 American Street and Interurban Railway Association, Atlantic City, N. J., Oct. 12-16.
 American Street and Interurban Railway Accountants Association, Atlantic City, N. J., Oct. 14-16.
 American Street and Interurban Railway Engineering Association, Atlantic City, N. J., Oct. 13-16.
 American Street and Interurban Railway Claim Agents Association, Atlantic City, N. J., Oct. 12-14.
 American Street and Interurban Railway Transportation and Traffic Association, Atlantic City, N. J., Oct. 12-15.
- 1909 — American Street and Interurban Railway Association, Denver, Col., Oct. 4-8.
 American Street and Interurban Railway Accountants Association, Denver, Col., Oct. 6-8.

- American Street and Interurban Railway Engineering Association, Denver, Col., Oct. 5-8.
 American Street and Interurban Railway Claim Agents Association, Denver, Col., Oct. 4-6.
 American Street and Interurban Railway Transportation and Traffic Association, Denver, Col., Oct. 4-7.
- 1910 — American Electric Railway Association, Atlantic City, N. J., Oct. 10-14.
 American Electric Railway Accountants Association, Atlantic City, N. J., Oct. 10-13.
 American Electric Railway Engineering Association, Atlantic City, N. J., Oct. 11-14.
 American Electric Railway Claim Agents Association, Atlantic City, N. J., Oct. 10-12.
 American Electric Railway Transportation and Traffic Association, Atlantic City, N. J., Oct. 10-13.
- 1911 — American Electric Railway Association, Atlantic City, N. J., Oct. 9-13.
 American Electric Railway Accountants Association, Atlantic City, N. J., Oct. 9-12.
 American Electric Railway Engineering Association, Atlantic City, N. J., Oct. 9-13.
 American Electric Railway Claim Agents Association, Atlantic City, N. J., Oct. 9-11.
 American Electric Railway Transportation and Traffic Association, Atlantic City, N. J., Oct. 9-12.
- 1912 — American Electric Railway Association, Chicago, Ill., Oct. 7-11.
 American Electric Railway Accountants Association, Chicago, Ill., Oct. 7-11.
 American Electric Railway Engineering Association, Chicago, Ill., Oct. 7-11.
 American Electric Railway Claim Agents Association, Chicago, Ill., Oct. 7-11.
 American Electric Railway Transportation and Traffic Association, Chicago, Ill., Oct. 7-10.
- 1913 — American Electric Railway Association, Atlantic City, N. J., Oct. 14-16.
 American Electric Railway Accountants Association, Atlantic City, N. J., Oct. 13-17.
 American Electric Railway Engineering Association, Atlantic City, N. J., Oct. 13-17.
 American Electric Railway Claim Agents Association, Atlantic City, N. J., Oct. 13-15.
 American Electric Railway Transportation and Traffic Association, Atlantic City, N. J., Oct. 13-16.
- 1914 — American Electric Railway Association, Atlantic City, N. J., Oct. 13-15.
 American Electric Railway Accountants Association, Atlantic City, N. J., Oct. 13-15.
 American Electric Railway Engineering Association, Atlantic City, N. J., Oct. 12-16.
 American Electric Railway Claims Association, Atlantic City, N. J., Oct. 12-15.
 American Electric Railway Transportation and Traffic Association, Atlantic City, N. J., Oct. 12-15.

- 1915 — American Electric Railway Association, San Francisco, Cal., Oct. 5-7.
American Electric Railway Accountants Association, San Francisco, Cal., Oct. 4-6.
American Electric Railway Engineering Association, San Francisco, Cal., Oct. 4-7.
American Electric Railway Claims Association, San Francisco, Cal., Oct. 4-7.
American Electric Railway Transportation and Traffic Association, San Francisco, Cal., Oct. 4-7.

**CONSTITUTIONS AND BY-LAWS OF THE AMERICAN
ELECTRIC RAILWAY ASSOCIATION AND ITS
AFFILIATED ASSOCIATIONS AS AMENDED
TO JANUARY 1, 1914**

**CONSTITUTION AND BY-LAWS OF THE AMERICAN
ELECTRIC RAILWAY ASSOCIATION**

(Adopted Sept. 27, 1905.)

CONSTITUTION

Name and Location

I. (a) The name of the Association shall be the "American Electric Railway Association."

(b) The headquarters of the Association shall be located in the City of New York.

(As Amended at 1910 Convention.)

Objects

II. The objects of the Association shall be as follows:

(a) The discussion and recommendation of methods of construction, management and operation of urban and interurban railways and the electrified sections of steam railways, and of safeguarding the interests of the same.

(b) The establishment and maintenance of a spirit of co-operation among the members, and the encouragement of friendly relations between the companies and the public.

(c) The acquisition of experimental, statistical and scientific knowledge relating to the construction, equipment and operation of urban and interurban railways and of the electrified sections of steam railways and the diffusion of this knowledge among the members.

(As Amended at 1910 Convention.)

Membership

III. The membership of this Association shall consist of three classes, as follows:

(a) Company members, consisting of American urban and interurban railway companies, or lessees, or individual owners of urban and interurban railways or steam railways, having electrified sections. Each Member Company shall be entitled to one vote, which shall be cast by the properly accredited delegate.

(b) Members, consisting of individuals, co-partnerships and corporations who are actively identified with urban and interurban railway interests, or with those of steam railways having electrified sections, and other persons who, in the opinion of the Executive Com-

mittee, have had experience of such a nature as to render desirable their connection with the Association. Members may ally themselves either directly with the American Association or with its Engineering Association, its Claim Agents Association or its Transportation and Traffic Association, provided such membership conforms to the Constitution and By-laws of the designated organization. Only those eligible, as determined by its Executive Committee, to the executive sessions of the American Association Conventions may be allied directly with the American Association. Excepting that they shall not be entitled to vote or hold office, the privileges of the members shall be similar to those of the company members, and in general, these privileges shall be as follows:

(1) The right to attend meetings of the particular organization with which the member is allied and to the floor of its convention.

(2) A cloth-bound copy of the proceedings of the particular organization with which the member is allied.

(3) Other general publications, including the convention bulletins and convention advance papers of that particular organization, which are distributed from time to time during the year.

(4) The right to wear the official emblem of the Association.

(c) Company Section members, consisting of individuals who are members of regularly organized Company Sections. Company Section members may ally themselves either directly with the American Association or with its Engineering Association, its Claims Association or its Transportation and Traffic Association, provided such membership conforms to the Constitution, and By-Laws of the designated organization. Only those eligible, as determined by its Executive Committee, to the executive sessions of the American Association Conventions may be allied directly with the American Association. Company Section members shall not be entitled to vote or hold office. Their privileges shall be as follows:

(1) The right to attend meetings of the particular organization with which the member is allied and to the floor of its Convention.

(2) The right to receive such publications of the Association as the Executive Committee may authorize.

(3) The right to wear the official emblem of the Association.

(d) Associations of Electric Railway Companies, or of individuals engaged in or affiliated with the electric railway business in the United States or other countries, organized for the purpose of the advancement and protection of the interests of the electric railway industry and for the purpose of dealing with specific local problems affecting their respective countries, sections, or localities, may, upon application, become Sectional Associations of this Association, and the relationship between such Associations and this Association shall be governed and controlled as follows:

1. The membership of such Sectional Associations shall be composed of Company-members, or individual members, who are members of this Association.

2. A Committee of this Association shall be appointed to promote the welfare of such Sectional Associations, and is to be known as the Committee on Sectional Associations.

This Committee shall be composed of the Presidents of such Sectional Associations and such other members as the Executive Committee of this Association shall appoint.

The Chairman of such Committee shall be designated by the Executive Committee of this Association, and such Chairman shall be a member of such Executive Committee.

3. Sectional Associations shall be entitled to all the benefits and privileges enjoyed by members of this Association, except the right to vote, without the payment of any membership dues other than those paid by the Company or Individual Members of such Sectional Association as members of this Association.

(e) Foreign members consisting of Urban and Interurban Railway Companies or Lessees or individual owners of Urban and Interurban or Steam Railways having electrified sections, located outside of the United States of America and its possessions, Canada and Mexico. Each member shall be entitled to one vote which shall be cast by the properly accredited representative.

(As Amended at 1910, 1912, 1913 and 1915 Conventions.)

Amendments

IV. This Constitution may be amended by a two-thirds vote of the members present at a regular or special meeting, provided the proposed amendment shall have the approval of two-thirds of the Executive Committee, and provided that a copy shall have been sent to each of the active members at least thirty days prior to the date of the meeting at which the proposed amendment is to be acted upon.

(As Amended at the 1915 Convention.)

BY-LAWS

Election of Members

I. Every applicant shall signify his desire to the Secretary, enclosing the requisite fee. All applications for membership shall be referred to the Executive Committee, a two-thirds vote of the members of the Executive Committee by ballot being necessary to election. In case of rejection the membership fee shall be returned. The Executive Committee shall report at each meeting the names of new members elected.

Officers

II. (a) The officers shall consist of a President, Vice-Presidents equal in number to the number of affiliated associations, a Treasurer and a Secretary. The officers shall assume their duties immediately after the meeting at which they are elected.

(b) The President and Vice-Presidents of the Association shall be elected at the Annual Meeting of the Association. All such elections shall be by ballot, and a majority of the votes of all the members present shall be necessary to an election. The Secretary and Treasurer shall be appointed by the Executive Committee. The offices of Secretary and Treasurer may be held by one and the same person; and the work of the Treasurer's office shall be performed in the Secretary's office.

President and Vice-Presidents

III. The President shall be the chief executive officer of the Association. He shall preside at the meetings of the Association and of the Executive Committee. In the absence of the President any duties devolving upon him may be performed by one of the Vice-Presidents.

Treasurer

IV. The duties of the Treasurer shall be to receive, safely keep and account for all moneys of the Association; to keep correct accounts of the same, and to pay all bills approved by the President. He shall make an annual report to be submitted to the Association. He shall give a bond to the President in such sum, and with such sureties, as shall be approved by the Executive Committee. He shall be paid a salary fixed by the Executive Committee.

Secretary

V. The duties of the Secretary shall be as follows:

(a) To take minutes of all proceedings of the Association and of the Executive Committee and to enter them in books proper for the purpose.

(b) To conduct the correspondence of the Association.

(c) To read the minutes and notices of all meetings and to present papers and communications if the authors wish it.

(d) To collect and file for the benefit of the members information and statistics regarding matters relating to the purposes of the Association.

(e) To receive applications for membership and to lay such before the Executive Committee.

(f) To attend to the publication of the proceedings of this Association; and, in conjunction with the Secretaries of the affiliated associations, to the publication of the proceedings of such affiliated associations.

(g) To send notices to all members of the Association at least thirty days before each meeting, mentioning papers to be read and any special business to be brought before the meeting.

(h) To perform such other duties as may be required of him by the Constitution and By-Laws, and such duties as may be assigned him by the Executive Committee.

The office of the Secretary shall be maintained at the headquarters of the Association. He shall be paid a salary fixed by the Executive Committee.

The Executive Committee

VI. (a) The entire charge and management of the affairs of the Association shall be in the hands of an Executive Committee, which shall consist of the President, the Vice-Presidents and one member appointed by each of the affiliated associations; and all the Past Presidents of the American Electric Railway Association and its predecessors, the American Street and Interurban Railway Association and the American Street Railway Association, these Past Presidents to be honorary members of the Executive Committee, but without the power to vote at meetings of the committee. The Executive Committee shall make arrangements for carrying out the objects of the Association.

(b) The Executive Committee shall hold a regular meeting before each regular annual meeting of the Association, and shall hold such special meetings as may be necessary. Such special meetings may be called by the President or by any five members of the Executive Committee. A majority of the members of the Executive Committee shall constitute a quorum at all meetings.

The Secretary shall give such reasonable notice of all meetings as the committee shall by vote prescribe, and all such notices shall, as far as practicable, specify the business to be brought to the attention of the committee at such meetings.

(c) The Executive Committee may assign to its allied association, the American Electric Railway Manufacturers' Association, the management of the exhibit features of the annual conventions, and it may arrange with the said Manufacturers' Association the details of such entertainments as may be given in connection with the annual conventions of this Association.

(d) The Executive Committee shall present a report to each regular annual meeting of the Association, and shall include in such report the names of members elected during the year, and its recommendations for the future work of the Association.

(As Amended at 1907 and 1910 Conventions.)

Meetings

VII. (a) Regular annual meetings of the Association shall be held at such time between the fifteenth day of September and the fifteenth

day of December, in each year, as the Executive Committee may decide to be best suited to the locality in which the meeting is to be held; the time to be decided upon and each member notified of the selection by the first day of May in the year in which the meeting is to be held. Special meetings may be held upon the order of the Executive Committee. Notice of every meeting shall be given by the Secretary, in a circular addressed to each member, at least thirty days before the time of the meeting. Fifteen members shall constitute a quorum at any meeting.

(b) At all meetings of the Association discussion shall be limited to active members; provided, however, that special privileges may be accorded others at the will of the meeting.

(c) At any regular or special meeting, executive sessions may be held. Such sessions shall be open to active members only.

Order of Business

VIII. The regular order of business shall be:

1. Reading of minutes of last meeting.
2. Report of the executive committee.
3. Address of the president.
4. Report of the treasurer.
5. Reports of standing committees.
6. Reports of special committees.
7. Reports from affiliated associations.
8. Reading and discussion of papers.
9. General business.
10. Election of officers.

Committee on Subjects

IX. In order to secure continuity of work and uniformity of general purpose, a Committee on Subjects shall be appointed each year by the Executive Committee. The function of this committee shall be to suggest topics for the work of the American Electric Railway Association and its affiliated associations for each year in advance.

The committee shall consist of one member from each of the affiliated associations and a number from the American Electric Railway Association equal to the number from the affiliated associations. The committee, at each annual meeting, shall present its plans for the coming year.

Voting

X. All votes except as herein otherwise provided, shall be *viva voce*; and in case of a tie, the presiding officer shall vote.

Reading of Papers

XI. All papers read at the meetings of the Association must relate to matters connected with the objects of the Association and must have been previously approved by the Executive Committee.

Affiliated Associations

XII. This Association shall do all in its power to promote the welfare of other associations organized with its approval to investigate technical matters connected with street and interurban railway construction and operation. To this end it will, in the following ways, and in others which may be determined by the Executive Committee, assist in the work of such affiliated associations:

(a) By authorizing the formation and approving the constitutions of such associations.

(b) By admitting to the Executive Committee a member from each of such associations.

(c) By granting financial assistance to such associations.

(d) By editing, printing and binding the reports of the proceedings of such associations.

(e) Through its Secretary and Executive Committee it will assist in arranging for conventions, suggesting suitable subjects for investigation; it will file information for reference and distribution and in every way endeavor to stimulate interest in all of the affiliated associations.

Papers, Drawings, Etc.

XIII. All papers, drawings and models submitted to the meetings of the Association shall remain the property of the owners; subject, however, to retention by the Executive Committee for examination and use, but at the owner's risk.

Fees

XIV. Active members shall pay an admission fee of ten dollars (\$10) and annual dues payable in advance based on gross earnings from electric railway operation during the preceding fiscal year of the respective companies, as follows:

GROSS RECEIPTS.		Annual Dues.
Under	\$50,000	\$25
Between	50,000 and \$100,000	50
"	100,000 " 250,000	75
"	250,000 " 500,000	125
"	500,000 " 1,000,000	175
"	1,000,000 " 2,000,000	225
"	2,000,000 " 3,000,000	275
"	3,000,000 " 4,000,000	325
"	4,000,000 " 5,000,000	375
"	5,000,000 " 6,000,000	425
"	6,000,000 " 7,000,000	475
"	7,000,000 " 8,000,000	525
"	8,000,000 " 9,000,000	575
"	9,000,000 " 10,000,000	650
"	10,000,000 " over	750

(As amended at 1914 Convention.)

Associate members shall pay in advance an annual fee of five dollars.

Company Section members shall pay in advance an annual fee of Two (\$2.00) Dollars, provided that fees of members joining the Section after the beginning of the Association's fiscal year shall be prorated in respect to the remaining months thereof.

Foreign members shall pay an admission fee of \$10.00 and annual dues payable in advance, based on gross earnings from electric railway operation during the preceding fiscal year of the respective companies as follows:

A minimum of \$25.00 which shall apply to companies whose gross earnings as above are under \$250,000. The dues of companies having gross receipts in excess of \$250,000 shall be according to the following scale:

	GROSS RECEIPTS.		Annual Dues.
Between	\$250,000 and	\$500,000	\$37 50
"	500,000 "	1,000,000	50 00
"	1,000,000 "	2,000,000	75 00
"	2,000,000 "	3,000,000	100 00
"	3,000,000 "	4,000,000	125 00
"	4,000,000 "	5,000,000	150 00
"	5,000,000 "	6,000,000	175 00
"	6,000,000 "	7,000,000	200 00
"	7,000,000 "	8,000,000	225 00
"	8,000,000 "	9,000,000	250 00
"	9,000,000 "	10,000,000	275 00
"	10,000,000 "	over	300 00

(As amended at 1910, 1913 and 1915 Conventions.)

Arrears

XV. No member whose annual payment shall be in arrears shall be entitled to vote.

Withdrawal

XVI. Any member may retire from membership by giving written notice to that effect to the Secretary, and the payment of all annual dues to that date, but shall remain a member and liable to the payment of annual dues until such payments are made, except as hereinafter provided.

Expulsion

XVII. A member may be expelled from the Association by the vote of two-thirds of the members present at any regular meeting of the Association, upon the written recommendation of the Executive Committee.

Rules of Order

XVIII. All rules not provided for in these By-Laws shall be those found in "Roberts' Rules of Order."

Amendments

XIX. All propositions for adding to or altering any of these By-Laws shall be laid before the Executive Committee, which shall bring them before the next regular or special meeting of the Association, if it shall consider such course desirable; and it shall be the duty of the Committee to do so, on the request, in writing, of any five members of the Association; provided that in all cases a copy of the proposed amendment shall have been sent to each of the active members at least thirty days prior to the date of the meeting at which the proposed amendment is to be acted upon.

(As amended at the 1915 Convention.)

XX. The Association shall institute a monthly publication to be called AERA, which shall be under the management of the Secretary, who shall act under the general supervision of an Advisory Committee, subject to approval by the Executive Committee as to the policy thereof and the expenditures therefor. The annual subscription price of the AERA shall be Two Dollars (\$2.00) and is included in the annual dues of the members.

(Added at 1912 Convention.)

**CONSTITUTION AND BY-LAWS OF THE AMERICAN
ELECTRIC RAILWAY ACCOUNTANTS' ASSOCIATION**

(Adopted Sept. 29, 1905.)

CONSTITUTION*Name*

I. The name of the Association shall be the American Electric Railway Accountants' Association, and its office shall be at the place where the secretary resides.

(As Amended at 1910 Convention.)

Objects

II. The objects of this Association shall be to bring together those engaged in the accounting department of urban and interurban railway companies and the electrified sections of steam railways for the interchange of ideas, to promote the adoption of a uniform system of accounts, and to improve the work of the accounting department.

(As Amended at 1910 Convention.)

Members

III. (a) The membership of this Association shall consist of active members of the American Electric Railway Association. Each member shall be entitled to one vote, which shall be cast by a properly accredited representative of the accounting department.

(b) Associate members, consisting of those associate members of the American Electric Railway Association who may be regularly employed in the accounting departments of its active member companies or who are regularly employed in the accounting departments of other urban or interurban railways or electrified sections of steam railways, or such other associate members of the American Electric Railway Association whose application for membership in this association shall be approved by the Executive Committee of this association. The privileges of the associate members shall be similar to those of active members excepting that they shall not be entitled to vote or hold office.

(c) Company Section members consisting of those Company Section members of the American Electric Railway Association, whose application for membership in this Association shall be approved by the Executive Committee of this Association.

(As Amended at 1910, 1911 and 1915 Conventions.)

Amendment

IV. This Constitution may be amended by a two-thirds vote of the members present at a regular meeting, provided the proposed amend-

ment shall have the approval of two-thirds of the Executive Committee, and provided that a copy shall have been sent to each of the active members of the American Electric Railway Association at least thirty days prior to the date of the meeting at which the proposed amendment is to be acted upon.

(As Amended at 1910 Convention.)

BY-LAWS

Officers and Executive Committee

I. The officers shall consist of a president, three vice-presidents, a secretary and treasurer, and four others, who shall constitute the Executive Committee. All Past-Presidents of the American Electric Railway Accountants' Association and its predecessors, the American Street and Interurban Railway Accountants' Association and the Street Railway Accountants' Association of America, shall be honorary members of the Executive Committee without the right to vote. The Executive Committee shall have the entire charge and management of the affairs of the Association. The officers and Executive Committee shall be elected by ballot at each annual meeting of the Association, and shall hold office until their successors shall be elected; they shall hold meetings at the call of the president, or in his absence at the call of the vice-presidents, in their order, and make arrangements for carrying out the objects of the Association. The duties of the secretary and treasurer shall be performed by the same person. The officers and Executive Committee shall assume their duties immediately after the close of the meeting at which they are elected. In case of resignation or death of any of the officers or members of the Executive Committee, the vacancy may be filled for the remainder of the term by the Executive Committee.

(As Amended at 1908 and 1910 Conventions.)

President

II. The president shall be the chief executive officer of the Association. The president, if present, or in his absence, one of the vice-presidents, in their order, if present, shall preside at all meetings of the Association, and of the Executive Committee, and shall represent this Association on the Executive Committee of the American Electric Railway Association.

(As Amended at 1910 Convention.)

Secretary and Treasurer

III. The duties of the secretary and treasurer shall be as follows:

(a) To receive and safely keep all moneys of the association; to keep correct accounts of the same, and to pay all bills approved by the president. He shall make an annual report, to be submitted to the association. He shall give a bond to the president in such a sum and

with such sureties as shall be approved by the executive committee. He shall be paid a salary fixed by the executive committee.

(b) To take minutes of all the proceedings of the association and of the executive committee and to enter them in books kept for the purpose.

(c) To conduct the correspondence of the association.

(d) To read minutes and notices at all meetings and to present papers and communications if the authors wish it.

(e) To collect and file for the benefit of the members information regarding matters relating to the purposes of the association.

(f) To attend to the publication of the proceedings of this association in connection with the secretary of the American Electric Railway Association.

(g) To send notices to all members of the Association at least thirty days before each meeting, mentioning papers to be read and any special business to be brought before the meeting.

(h) To perform such other duties as may be required of him by the constitution and by-laws, and such duties as may be assigned him by the executive committee.

Executive Committee

IV. (a) The executive committee shall hold a regular meeting before each regular annual meeting of the association, and shall hold such special meetings as may be necessary. Such special meetings may be called by the president or any five members of the executive committee. A majority of the members of the executive committee shall constitute a quorum at all meetings. A vote of the executive committee may be taken by mail when deemed necessary by the president.

(b) The secretary shall give such reasonable notice of all meetings as the committee shall by vote prescribe, and all such notices shall as far as practicable specify the business to be brought to the attention of the committee at such meetings.

(c) The executive committee shall present a report to each regular annual meeting of the association, and shall include in such report the names of the members elected during the year, and its recommendation for the future work of the association.

Meetings

V. Regular annual meetings of the association shall convene at a time and place to be approved by the executive committee. Special meetings may be held upon the order of the executive committee. Notice of every meeting shall be given by the secretary, in a circular addressed to the members, at least thirty days before the time of the meeting. Fifteen members shall constitute a quorum at any meeting.

Order of Business

VI. At the regular annual meeting of the association the order of business shall be:

1. Reading of the minutes of the last meeting.
2. Address of the president.
3. Report of the executive committee.
4. Report of the secretary and treasurer.
5. Reports of special committees.
6. Reading and discussion of papers.
7. General business.
8. Election of officers.

At the other general meetings of the association the order of business shall be the same, except as to the 3d, 4th and 8th clauses.

Voting

VII. All votes except as herein otherwise provided shall be *viva voce* or by ballot upon the request of any member, and in case of a tie the presiding officer shall vote.

Reading of Papers

VIII. All papers read at the meetings of the association must relate to matters connected with the objects of the association, and must have the approval of the executive committee before being read. Persons to whom subjects are assigned must signify in writing their intention to prepare the paper, which is to be forwarded to the secretary at least sixty days previous to the date of meeting.

Papers, Blanks and Forms

IX. All papers, blanks and forms submitted to the meetings of the association shall remain the property of the owners, subject, however, to be retained by the executive committee for examination and use.

Rules of Order

X. All rules not provided for in these by-laws shall be those found in "Roberts' Rules of Order."

Amendment

XI. Notice of all propositions for adding to or altering any of these by-laws shall be given to the members of the association at least thirty days before the meeting at which they are to be acted upon.

Copies of Constitution and By-Laws

XII. Each member of the association shall be furnished by the secretary with a copy of the constitution and by-laws of the association and also a list of the members.

CONSTITUTION AND BY-LAWS OF THE AMERICAN ELECTRIC RAILWAY ENGINEERING ASSOCIATION

(Adopted Oct. 16, 1906.)

CONSTITUTION

Name

I. The name of the association shall be the "American Electric Railway Engineering Association," and its office shall be located in the city of New York, N. Y.

(As Amended at 1910 and 1915 Conventions.)

Objects

II. The objects of this association shall be to bring together those engaged in electric railway engineering with urban, interurban or the electrified sections of steam railroads, for the interchange of ideas, to acquire and distribute information and to promote uniformity of practice.

(As Amended at 1910 and 1915 Conventions.)

Members

III. The membership of this association shall consist of three classes, as follows:

(a) Company members, consisting of Company members of the American Electric Railway Association. Each Company member shall be entitled to one vote on all questions coming before the association, which vote shall be cast by its properly accredited delegate who is to be appointed from its mechanical, electrical, way or other engineering department. Each company member may be represented by as many delegates from its engineering departments as it may desire.

(b) Members consisting of individuals who are members of the American Electric Railway Association, and who have elected to ally themselves with the Engineering Association in accordance with the provisions of the constitution of the American Electric Railway Association.

(c) Members are not entitled to vote. They are entitled to hold office only if in the employ of company members. Except as otherwise provided for in the constitution of the American Electric Railway Association, the following privileges are accorded them:

(1) The right to attend meetings of this association and to the floor of its convention.

(2) Eligibility to membership on committees.

(3) The right to receive a cloth-bound copy of the proceedings of this association.

(4) The right to receive other general publications, including AERA and convention advance papers of this association.

(5) The right to wear the official emblem of this association.

(d) Company Section Members, consisting of Company Section Members of the American Electric Railway Association who may elect to ally themselves with this Association.

(As Amended at 1910 and 1915 Conventions.)

Amendment

IV. This constitution may be amended by a two-thirds vote of the properly accredited delegates present at a regular meeting, provided the proposed amendment shall have the approval of two-thirds of the executive committee, and provided also that a copy shall have been sent to each of the Company members, at least thirty (30) days prior to the date of the meeting at which the proposed amendment is to be acted upon.

(As Amended at the 1915 Convention.)

BY-LAWS

I.—Officers and Executive Committee

(a) The officers shall consist of a president, three vice-presidents, a secretary and a treasurer. The executive committee shall consist of the officers and four representatives of Company members; and all the past presidents of the American Electric Railway Engineering Association and its predecessors, the American Street and Interurban Railway Engineering Association and the American Railway Mechanical and Electrical Association, these past presidents to be honorary members of the executive committee, but without the power to vote at meetings of the Committee. The executive committee shall have the entire charge and management of the affairs of the association. The officers of this Association shall be chosen from the mechanical, electrical, way or other engineering departments of Company members. The duties of secretary and treasurer may be performed by the same person.

(As amended at 1914 Convention.)

(b) The officers and executive committee members shall be elected at the final session of each annual meeting of the association by votes of accredited delegates of Company members present at the session. Company members not represented may forward their votes by letter to the secretary and such votes shall be cast by the secretary. A majority of votes cast shall be necessary to an election.

(As amended at 1914 Convention.)

(c) A nominating committee of five members, two of whom shall be past presidents and the others not members of the executive committee, shall be appointed by the president at the time of the formation of standing committees. The nominating committee shall notify

the persons selected for nomination and shall receive their consent in writing. It shall be the duty of this committee to send to the secretary on or before July 1st the names of consenting nominees for officers and members of the executive committee. The names of the nominees proposed by the committee shall be published in the August issue of AERA.

In addition, officers may be nominated by a written communication to the secretary, signed by twenty or more Company members, and accompanied by the nominees' acceptances. To receive consideration, such nominations must be in the secretary's hands on or before September 1st.

(As amended at 1914 Convention.)

(d) The nominating committee shall have power to fill any vacancy in the list of nominations proposed by it, caused by withdrawal or other reasons after nomination and prior to election.

II.—Duties of Officers

The officers and members of the executive committee of the association shall assume their duties immediately after the close of the meeting at which they are elected. They shall hold meetings at the call of the president, or, in his disability, at the call of the vice-presidents, in their order, and make arrangements for carrying out the objects of the association. In case of resignation or death of an officer or a member of the executive committee, the vacancy may be filled for the unexpired term by the executive committee.

(As amended at 1914 Convention.)

III.—President

The president shall be the chief executive officer of the association. The president, if present, or in his absence one of the vice-presidents, in their order, if present, shall preside at all meetings of the association, and of the executive committee, and shall represent this association on the executive committee of the American Electric Railway Association.

(As amended at 1914 Convention.)

IV.—Secretary and Treasurer

The duties of the secretary shall be as follows:

(a) To take minutes of all the proceedings of the association and of the executive committee, and to enter them in books kept for the purpose.

(b) To conduct the correspondence of the association.

(c) To read minutes and notices at all meetings, and to present papers and communications, if the authors wish it.

(d) To collect and file for the benefit of the members information regarding matters relating to the purposes of the association.

(e) To attend to the publication of the proceedings of this association in connection with the secretary of the American Electric Railway Association.

(f) To send notices to all members of the association at least thirty days before each meeting, mentioning papers to be read and any special business to be brought before the meeting.

(g) To perform such other duties as may be required of him by the constitution and by-laws, and such duties as may be assigned to him by the executive committee.

He may be paid a salary fixed by the executive committee.

The duties of the treasurer shall be as follows:

To keep correct account of the expenditure of the moneys appropriated by the American Association for the use of the Engineering Association; to present to the treasurer of the American Association for all such expenditures, vouchers duly signed by him and approved by the president of the Engineering Association. He shall make an annual report to be submitted to the association. He may be paid a salary fixed by the executive committee.

(Entire section as amended at 1914 Convention.)

V.—Executive Committee

(a) The executive committee shall hold a regular meeting before each regular annual meeting of the association, and shall hold such special meetings as may be necessary. Such special meetings may be called by the president, or any five members of the executive committee. A majority of the members of the executive committee shall constitute a quorum at all meetings. A vote of the executive committee may be taken by mail when deemed necessary by the president.

(b) The secretary shall give such reasonable notice of all meetings as the committee shall by vote prescribe, and all such notices shall, as far as practicable, specify the business to be brought to the attention of the committee at such meetings.

(c) The executive committee shall present a report to each regular annual meeting of the association, and shall include in such report the names of the members elected during the year, and its recommendations for the future work of the association.

(Entire section as amended at 1914 Convention.)

VI.—Meetings

The regular annual meeting of this association shall convene at the same time and place as that of the American Electric Railway Association. Notice of such meeting of the American Association shall constitute notice of meeting of the Engineering Association.

Fifteen accredited delegates of Company members shall constitute a quorum at any meeting.

(As amended at 1914 Convention.)

VII.—Order of Business

At the regular meeting of the association the order of business shall be:

1. Reading of the minutes of the last meeting.
2. Address of the president.
3. Report of the executive committee.
4. Report of the secretary and treasurer.
5. Reports of special committees.
6. Reading and discussion of papers.
7. General business.
8. Election of officers.

At other general meetings of the association the order of business shall be the same, except as to the 3d, 4th and 8th clauses.

(Entire section as amended at 1914 Convention.)

VIII.—Committee on Subjects

In order to secure continuity of work and uniformity of general purpose, a committee on subjects shall be appointed each year by the executive committee. The function of this committee shall be to suggest topics for the work of the Engineering Association for each year in advance. This committee shall hold office until the first meeting of the executive committee following the annual convention of the association. The committee shall consist of the Engineering Association's representatives on the Committee on Subjects of the American Association, and two other members. The committee shall present its plans to the executive committee at or prior to the meeting of same following the annual convention.

(As amended at 1914 Convention.)

IX.—Voting

All votes, except as herein otherwise provided, shall be *viva voce*, or by ballot upon the request of any company member and in the case of a tie, the presiding officer shall vote.

(As amended at 1914 Convention.)

X.—Reading of Papers

All papers read at the meeting of the association must relate to matters connected with the objects of the association, and must have the approval of the executive committee before being read. Persons to whom subjects are assigned must signify in writing their intention to prepare the paper and forward it to the secretary at least sixty (60) days previous to the date of the meeting.

(As amended at 1914 Convention.)

XI.—Papers, Illustrations and Models

All papers, illustrations and models submitted to the meeting of the association shall remain the property of the owners; subject, however, to retention by the executive committee for examination and use, but at the owner's risk.

(As amended at 1914 Convention.)

XII.—Rules of Order

All rules not provided for in these by-laws shall be found in "Roberts' Rules of Order."

(As amended at 1914 Convention.)

XIII.—Amendment

All propositions for adding to or altering any of these by-laws shall be laid before the executive committee, which shall bring them before the next regular meeting of the association if it shall consider such course desirable, and it shall be the duty of the committee to do so on the request, in writing, of any five Company members of the association. A two-thirds vote of the Company members present at any regular meeting shall be necessary for an approval to an amendment to these by-laws.

(As amended at 1914 Convention.)

XIV.—Copy of Constitution and By-Laws

Each Company member shall be furnished by the secretary with a copy of the constitution and by-laws of the association, and also a list of the membership. Each member shall be furnished with a copy of the constitution and by-laws.

(As amended at 1914 Convention.)

**CONSTITUTION AND BY-LAWS OF THE AMERICAN
ELECTRIC RAILWAY CLAIMS ASSOCIATION**

(Adopted Oct. 15, 1906.)

CONSTITUTION***Name***

I. The name of this association shall be "American Electric Railway Claims Association," and its office shall be at the place where the secretary resides.

(As Amended at 1910 and 1912 Conventions.)

Objects

II. The objects of this association shall be to bring together those engaged in the claim departments of urban and interurban railways and the electrified sections of steam railways for the interchange of ideas, and to promote the mutual protection of such companies from fraudulent claims.

(As Amended at 1910 Convention.)

Members

III. The membership of this association shall consist of two classes as follows:

(a) Active members, consisting of active members of the American Electric Railway Association. Each active member shall be entitled to one vote on all questions coming before this association, which shall be cast by a properly accredited representative of its claim department. Each active member shall send as many delegates from the claim department as it may desire.

(b) Associate members, consisting of those associate members of the American Electric Railway Association who may be employed in or by the claim departments of its active member companies or who are actively engaged in claim work and employed in or by the claim departments of other urban and interurban railways, or electrified sections of steam railways, or such of these associate members as may desire to ally themselves with this association. The privileges of the associate members shall be similar to those of active members, excepting that they shall not be entitled to vote or hold office.

(As Amended at 1910 and 1912 Conventions.)

Amendment

IV. This constitution may be amended by a two-thirds vote of the members present at a regular meeting, provided the proposed

amendment shall have the approval of two-thirds of the executive committee, and, provided that a copy shall have been sent to each of the active members of the American Electric Railway Association at least thirty days prior to the date of the meeting at which the proposed amendment is to be acted upon.

(As Amended at 1910 Convention.)

BY-LAWS

Officers and Executive Committee

I. The officers shall consist of a president, three vice-presidents, a secretary and treasurer, and four others, who shall constitute the executive committee. The executive committee shall have the entire charge and management of the affairs of the association. The officers and executive committee shall be elected by ballot at each annual meeting of the association, and shall hold office until their successors shall be elected. They shall hold meetings at the call of the president, or in his absence at the call of the vice-presidents, in their order, and make arrangements for carrying out the objects of the association. The duties of secretary and treasurer shall be performed by the same person. The officers and executive committee shall assume their duties immediately after the close of the meeting at which they are elected. In case of the resignation or death of an officer or a member of the executive committee, the vacancy may be filled, for the unexpired term, by the executive committee.

Former presidents of the association, and its predecessors, American Street and Interurban Railway Claim Agents' Association, and American Electric Railway Claim Agents' Association, may by vote of executive committee become honorary members of said committee.

(As Amended at 1909, 1911 and 1912 Conventions.)

President

II. The president shall be the chief executive officer of the association. The president, if present, or in his absence, one of the vice-presidents, in their order, if present, shall preside at all meetings of the association and of the executive committee, and shall represent this association on the executive committee of the American Electric Railway Association.

(As Amended at 1910 Convention.)

Secretary and Treasurer

III. The duties of the secretary and treasurer shall be as follows:

(a) To take minutes of all the proceedings of the association and of the executive committee, and to enter them in books kept for the purpose.

- (b) To conduct the correspondence of the association.
- (c) To read minutes and notices at all meetings and to present papers and communications if the authors wish it.
- (d) To collect and file for the benefit of the members information regarding matters relating to the purposes of the association.
- (e) To attend to the publication of the proceedings of this association in connection with the secretary of the American Electric Railway Association.
- (f) To send notices to all members of the association at least thirty days before each meeting, mentioning papers to be read and any special business to be brought before the meeting.
- (g) To perform such other duties as may be required by the constitution and by-laws, and such duties as may be assigned him by the executive committee.

(As Amended at 1910 Convention.)

Executive Committee

IV. (a) The executive committee shall hold a regular meeting before each regular meeting of the association, and shall hold such special meetings as may be necessary. Such special meetings may be called by the president. Five members shall constitute a quorum at all meetings. A vote of the executive committee may be taken by mail when deemed necessary by the president.

(b) The secretary shall give such reasonable notice of all meetings as the committee shall by vote prescribe, and all such notices shall, as far as practicable, specify the business to be brought to the attention of the committee at such meetings.

(c) The executive committee shall present a report to each annual meeting of the association, and shall include in such report the names of the members elected during the year and its recommendations for the future work of the association.

(As Amended at 1909 Convention.)

Meetings

V. Regular annual meetings of this association shall convene at a time and place to be approved by the executive committee. Special meetings may be held upon the order of the executive committee. Notice of every meeting shall be given by the secretary in a circular addressed to the members at least thirty days before the time of the meeting. Ten members shall constitute a quorum at any meeting.

VI. At the regular annual meeting of the association the order of business shall be:

1. Reading of the minutes of the last meeting.
2. Address of the president.
3. Report of the executive committee.

4. Report of the secretary and treasurer.
5. Reports of special committees.
6. Reading and discussion of papers.
7. General business.
8. Election of officers.

At other general meetings of the association the order of business shall be the same, except as to the 3d, 4th and 8th clauses.

Voting

VII. All votes, except as herein otherwise provided, shall be *viva voce*, or by ballot upon the request of any member, and in the case of a tie the presiding officer shall vote.

Reading of Papers

VIII. All papers read at the meetings of the association must relate to matters connected with the objects of the association, and must have the approval of the executive committee before being read. Persons to whom subjects are assigned must signify in writing their intention to prepare the paper, which is to be forwarded to the secretary at least sixty days previous to the date of the meeting.

Papers, Blanks and Forms

IX. All papers, blanks and forms submitted to the meetings of the association shall remain the property of the owners, subject, however, to be retained by the executive committee for examination and use, but at the owner's risk.

Rules of Order

X. All rules not provided for in these by-laws shall be those found in "Roberts' Rules of Order."

Amendment

XI. Notice of all propositions for adding to or altering any of these by-laws shall be given to the members of the association at least thirty days before the meeting at which they are to be acted upon.

Copy of Constitution and By-Laws

XII. Each member of the association shall be furnished with a copy of the constitution and by-laws of the association and also a list of the members.

**CONSTITUTION AND BY-LAWS OF THE AMERICAN
ELECTRIC RAILWAY TRANSPORTATION AND
TRAFFIC ASSOCIATION**

(Adopted Jan. 30, 1908.)

CONSTITUTION

Name

I. The name of this Association shall be the "American Electric Railway Transportation and Traffic Association," and its office shall be at the place where the secretary resides.

(As Amended at 1910 Convention.)

Objects

II. The objects of this Association shall be to bring together general managers, managers, superintendents, passenger, express and freight agents, advertising managers, and other operating officials and employes engaged in or connected with the actual operation of urban and interurban railway companies and the electrified sections of steam railways for the interchange of ideas, consideration of operating and transportation problems, methods of promoting traffic, and all other matters incident thereto.

(As Amended at 1910 Convention.)

Members

III. The membership of this Association shall consist of two classes, as follows:

(a) Active members, consisting of active members of the American Electric Railway Association. Each active member shall be entitled to one vote on all questions coming before this Association, which shall be cast by a properly accredited representative of its transportation or traffic department. Each active member shall send as many delegates from these departments as it may desire.

(b) Associate members, consisting of associate members, of the American Electric Railway Association, who may elect to ally themselves with this Association.

(c) Company Section Members, consisting of Company Section Members of the American Electric Railway Association who may elect to ally themselves with this Association.

(As Amended at 1910 and 1915 Conventions.)

Amendment

IV. This constitution may be amended by a two-thirds vote of the members present at a regular meeting, provided the proposed amendment shall have the approval of two-thirds of the executive committee, and provided also that a copy shall have been sent to each of the active members, at least thirty days prior to the date of the meeting at which the proposed amendment is to be acted upon.

BY-LAWS

Officers and Executive Committee

I. The officers shall consist of a president, three vice-presidents, a secretary and treasurer, and four others, who shall constitute the executive committee. The executive committee shall have the entire charge and management of the affairs of the Association. The secretary and treasurer shall be the secretary and treasurer of the American Electric Railway Association. All other officers and members of the executive committee shall be elected by ballot at each annual meeting of the Association, and shall hold office until their successors shall be elected. The officers and members of the executive committee of this Association, with the exception of the secretary and treasurer, shall be chosen from the transportation and traffic departments of active members.

(As Amended at 1910 Convention.)

Duties of Officers

II. The officers of the association shall assume their duties immediately after the close of the meeting at which they are elected. They shall hold meetings at the call of the president, or, in his absence, at the call of the vice-presidents, in their order, and make arrangements for carrying out the objects of the Association. In case of resignation or death of an officer or a member of the executive committee, the vacancy may be filled for the unexpired term by the executive committee.

President

III. The president shall be the chief executive officer of the Association. The president, if present, or in his absence, one of the vice-presidents in their order, if present, shall preside at all meetings of the Association, and of the executive committee, and shall represent this Association on the executive committee of the American Electric Railway Association.

(As Amended at 1910 Convention.)

Secretary and Treasurer

IV. The duties of the secretary and treasurer shall be as follows:

(a) To receive and safely keep all moneys of the Association; to keep correct accounts of the same, and to pay all bills of the Association approved by the president.

He shall make an annual report, to be submitted to the Association at its annual convention. His bond given to the American Electric Railway Association shall be and is deemed to be sufficient for all the purposes of this Association.

His salary shall be fixed and paid by the American Electric Railway Association.

(b) To take minutes of all the proceedings of the Association and of the executive committee, and to enter them in books kept for that purpose.

(c) To conduct the correspondence of the Association.

(d) To read minutes and notices at all meetings, and to present papers and communications, if the authors wish it.

(e) To collect and file for the benefit of the members information regarding matters relating to the purposes of the Association.

(f) To attend to the publication of the proceedings of this Association in connection with the secretary of the American Electric Railway Association.

(g) To send notices to all members of the Association at least thirty days before each meeting, mentioning papers to be read, and any special business to be brought before the meeting.

(h) To perform such other duties as may be required of him by the constitution and by-laws, and such duties as may be assigned him by the executive committee.

(As Amended at 1910 Convention.)

Executive Committee

V. (a) The executive committee shall hold a regular meeting before each regular annual meeting of the Association, and shall hold such special meetings as may be necessary. Such special meetings may be called by the president, or any five members of the executive committee. A majority of the members of the executive committee shall constitute a quorum at all meetings. A vote of the executive committee may be taken by mail when deemed necessary by the president.

(b) The secretary shall give such reasonable notice of all meetings as the committee shall by vote prescribe, and all such notices shall, as far as practicable, specify the business to be brought to the attention of the committee at such meetings.

(c) The executive committee shall present a report to each regular annual meeting of the Association, and shall include in such report the names of the members elected during the year, and its recommendations for the future work of the Association.

Meetings

VI. The regular annual meeting of this Association shall convene at a time and place to be approved by the executive committee. Special meetings may be held upon the order of the executive committee. Notice of every meeting shall be given by the secretary in a circular addressed to the members at least thirty days before the time of meeting. Fifteen members shall constitute a quorum at any meeting.

Order of Business

VII. At the regular meeting of the Association the order of business shall be:

1. Reading of the minutes of the last meeting.
2. Report of the executive committee.
3. Address of the president.
4. Report of the secretary and treasurer.
5. Reports of standing committees.
6. Reports of special committees.
7. Reading and discussion of papers.
8. General business.
9. Election of officers.

At the general meetings of the Association the order of business shall be the same, except as to the 2nd, 4th and 9th clauses.

Voting

VIII. All votes, except as herein otherwise provided, shall be *viva voce*, or by ballot upon the request of any member, and in the case of a tie, the presiding officer shall vote.

Reading of Papers

IX. All papers read at the meetings of the Association must relate to matters connected with the objects of the Association, and must have the approval of the executive committee before being read. Persons to whom subjects are assigned, must signify in writing their intention to prepare the paper, and forward it to the secretary at least sixty days previous to the date of the meeting.

Papers, Illustrations and Models

X. All papers, illustrations and models submitted to the meeting of the Association shall remain the property of the owners; subject however to retention by the executive committee for examination and use, but at the owner's risk.

Rules of Order

XI. All rules not provided for in these by-laws shall be those found in "Roberts' Rules of Order."

Amendment

XII. Notice of all propositions for adding to or altering any of these by-laws shall be given to the members of the Association, at least thirty days before the meeting at which they are to be acted upon.

Copy of Constitution and By-Laws

XIII. Each member of the Association shall be furnished by the secretary with a copy of the constitution and by-laws of the Association and also a list of the members.

MEMBER COMPANIES OF THE AMERICAN ELECTRIC RAILWAY ASSOCIATION AND THEIR PRINCIPAL OFFICERS, ALPHABETICALLY ARRANGED

ALABAMA CITY, GADSDEN & ATTALLA RAILWAY Co., *Gadsden, Ala.*

President, E. T. Schuler.
Vice-Pres., G. H. Schuler.
Gen'l. Mgr. & Supt., C. J. Zell.
Trainmaster, M. D. Payne.

ALGIERS RAILWAY & LIGHTING Co., *New Orleans, La.*

President, C. D. Warren.
Vice-Pres., O. T. Maier.
Secy. & Treas., E. H. McCaleb.
Asst. Secy., R. M. Salvant.
Gen. Supt., E. W. Burgis.

ALTOONA & LOGAN VALLEY ELECTRIC RAILWAY Co., *Altoona, Pa.*

President, J. J. Sullivan.
Vice-Pres., H. J. Crowley.
Vice-Pres., C. L. S. Tingley.
Secy. & Treas., W. W. Perkins.
Asst. Secy., Asst. Treas. & Comp.,
F. J. Pryor, Jr.
Gen. Mgr., S. S. Crane.
Claim Agt., S. B. Hare.
Supt. of Trans., L. T. Shannon.
Master Mech., Robert Long.
Supt. Const., F. D. Hain.
Cashier, G. E. Sweet.

AMARILLO STREET RAILWAY COMPANY, *Amarillo, Texas.*

President, Henry L. Doherty.
1st Vice-Pres., Frank W. Freauff.
2d Vice-Pres. & Gen. Mgr., Guy
W. Fuller.

ANNISTON ELECTRIC & GAS Co., *Anniston, Ala.*

Chairman Bd Directors, Frank S.
Washburn.

President, James Mitchell.
1st Vice-Pres., J. W. Worthington.
2d Vice-Pres., T. W. Martin.
Gen. Mgr., F. H. Chamberlain.
Secy. & Treas., Wiley Alford.
Local Mgr., A. L. Kenyon.
Local Aud., L. W. Jackson.
Gen. Supt., J. F. Knowlen.
Local Aud., L. W. Jackson.
Purch. Agt., E. S. Center, Jr.
Mast. Mech., John H. Bowles.
Roadmaster, T. S. Wade.

APPALACHIAN POWER Co., *Bluefield, W. Va.*

President, Robert C. Morse.
Vice-Presidents, J. A. Trawick, C.
N. Mason.
Secy., A. H. Mosle.
Treas., W. R. Emerson.
Asst. Secy., W. R. Emerson.
Asst. Secy., W. E. Terry.
Asst. Treas., W. E. Terrv.
Asst. Treas., W. H. Whitney.

ARKANSAS VALLEY INTERURBAN RAIL- WAY Co., *Wichita, Kan.*

President, Geo. Theis, Jr.
Vice-Pres., W. O. VanArsdale.
Secy., Chas. D. Bell.
Treas., C. H. Smyth.
Auditor, H. M. Dobbin.
Supt., Pur. Agt. & Chief Eng.,
Charles D. Bell.
Master Mech., C. W. Geiger.
Roadmaster, W. J. Faulkner.

THE ARKANSAS VALLEY RAILWAY LIGHT & POWER Co., *Pueblo, Colo.*

President, George H. Harries.
Vice-Pres. & Gen. Mgr., W. F.
Raber.

Secy., Herbert List.
Treas., R. J. Graf.
Assist. Secy., E. J. Rosenauer.
Assist. Treas., W. J. Benning.
Supt. Power Plant, Machinery and
Shops, C. A. Orr.
Supt. Trans., W. C. Porter.
Supt. Lighting, Power & Distribu-
tion, E. F. Stone.
Claim Agent, H. P. Vories.

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 Elec. Supt., C. A. Knight.
 Supt. Ry. Dept., I. H. McArthur.
 Master Mech., A. J. Carter.
 Claim Agt., C. M. Wright.
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 Gen. Supt. Trans., M. J. Feron.
 Eng. Main. of Way, B. J. Fallon.
 Master Mech., H. A. Johnson.
 Elec. Eng., E. J. Blair.
 Chief Eng., C. M. Mock.
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 Gen. P. Agt., C. B. Hunt.
 Pur. Agt., C. B. Ross.
 Chief Eng., H. D. Sanderson.
 Elec. Supt., F. W. Haak.
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- MIDDLESEX & BOSTON STREET RAILWAY Co., *Newtonville, Mass.*
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 Claim Agt., Pitt F. Drew.
 Supt. of 1st Div., Samuel E. Walker.

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 Supt. of 4th Div., F. P. Quackenbush.
 Supt. of 5th Div., W. S. Scamman.
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 Asst. Secy. & Asst. Treas., F. J. Boehm.
 Asst. Secy., Robert Randall.
 Auditor, G. W. Kalweit.
 Eng. of Way & Struc., R. H. Pinkley.
 Supt. of Way & Struc., R. R. Lukens.
 Supt. of Roll. Stock, H. A. Mullett.
 Supt. of Trans., George Kuemmerlein, Jr.
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 Eng. Pr. Plants, John Anderson.
 Elec. Eng., G. G. Post.
 Sales Mgr., R. B. Snyder.
 Com. Eng., F. A. Coffin.
 Pur. Agent, F. V. Benz.
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- MONTANA POWER Co. (THE)—STREET RAILWAY BRANCH, Great Falls, Mont.**
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 Elec. Eng., A. S. Byrd.
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- MORRIS COUNTY TRACTION Co., Morristown, N. J.**
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 Whitfield Ford.
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MUSKOGEE ELECTRIC TRACTION Co., Muskogee, Okla.

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Supt. Pwr. Hse. & Sub-Sta., H. S. Badger.
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 Claim Agt., T. O. Edwards.
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 Supt. of Trans., Interbn. Lines, M. D. Kilbride.
 Master Mech., G. M. Cameron.
 Elec. Eng., C. L. Cadle.
 Gen. Pass. & Exp. Agt., B. E. Wilson.

NEW YORK STATE RAILWAYS — (Continued).

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 Pur. Agt., A. Ogilvie.
 Super. Sched., H. E. Hicks.
 Cashier, D. A. Byrne.
 Land & Tax Agt., F. F. Janes.

NEW YORK STATE RAILWAYS, Syracuse, N. Y.

Gen. Mgr., B. E. Tilton.
 Gen. Supt., J. E. Duffy.
 Supt. of Trans., W. E. Holstock.
 Claim Agt., A. D. Brown.
 Auditor, J. M. Joel.
 Pur. Agt., P. J. Honold.
 Elec. Eng., G. N. Brown.
 Master Mech., F. L. Hinman.
 Engr. M. of W., E. P. Roundley.
 Roadmaster, J. T. Hogan.
 Gen. Pass. Agt., C. R. Gowen.
 Gen. Exp. Agt., F. W. Watts.
 Cashier, T. P. Whelley.
 Supt. Line & Bldgs., H. G. Throop.

NEW YORK STATE RAILWAYS, Utica, N. Y.

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 Gen. Supt., J. E. Duffy.
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 Pur. Agt., P. J. Honold.
 Eng. M. of W., H. S. Johnson.
 Master Mech., J. R. Ayers.
 Elec. Eng., G. N. Brown.
 Roadmaster, R. W. Owens.
 Gen. Pass. Agt., C. R. Gowen.
 Gen. Exp. Agt., F. W. Watts.
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NORFOLK & BRISTOL STREET RAILWAY Co., Foxboro, Mass.

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NORTH JERSEY RAPID TRANSIT CO. — (Continued).

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NORTHERN ILLINOIS LIGHT & TRACTION Co., Ottawa, Ill.

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 Gen. Mgrs., Stone & Webster Management Association.
 Claim Agt., K. M. Watson.
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 Master Mech., H. E. Wurzbach.
 Supt. Trans., J. M. Read.
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 Pur. Agt., P. D. Kline.
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OHIO ELECTRIC RAILWAY COMPANY (THE), Springfield, O.

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 Consult. Elec. Eng., Thos. Elliott.
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OHIO VALLEY ELECTRIC RAILWAY COMPANY, Huntington, W. Va.

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 Claim Agt., George W. Struble.
 Chief Civil Enr., Guy B. Treat.
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OMAHA, LINCOLN & BEATRICE RAILWAY Co., Lincoln, Neb.

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OTSEGO & HERKIMER RAILROAD Co., Cooperstown, N. Y.

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 Treas. & Auditor, H. R. Skirving.
 Supt., F. B. Sheldon.
 Master Mech., G. C. Killeen.
 Chief Eng., C. F. Clark.
 Elec. Eng., C. S. Stanton.
 Enr. Maint. of Wav. R. P. Waller.
 Roadmaster, Jas. Feenrv.
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OTTAWA ELECTRIC RAILWAY Co., Ottawa, Ont.

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 Vice-Pres., Warren Y. Soper.
 Secy. & Treas., James D. Fraser.
 Surt., F. D. Burpee.
 Auditor, R. Quain.
 Pur. Agt., D. N. Gill.

OTTUMWA RAILWAY & LIGHT Co., Ottumwa, Iowa.

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 Sec., R. I. Graf.
 Auditor, Roy E. Ballard.
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 Supt., F. Isaacson.
 Eng. Power Sta., H. T. Yust.
 Master Mech., F. Weirsmith.
 Roadmaster, H. Ramsey.
 Railway Surt., F. Isaacson.
 Lighting Surt., W. D. Farrell.

PACIFIC ELECTRIC RAILWAY Co., Los Angeles, Cal.

President, Paul Shonn.
 Gen. Mgr., J. McMillan.
 Traffic Mgr., D. W. Pontius.

PACIFIC ELECTRIC RAILWAY Co.—(Continued).

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Asst. to Traf. Mgr., O. A. Smith.
Auditor, H. A. Culloden.
Treas., I. W. Hellman.
Chief Counsel, Frank Karr.
Mgr. Outside Operation, C. H. Burnett.

Land Agent, G. L. Bugbee.
Tax & Contract Agt., W. V. Hill.
Chief Eng., G. E. Pillsbury.
Asst. Treas., M. S. Wade.
Asst. Chief Eng., E. C. Johnson.
Chief Sur., G. L. Hutchinson.
Gen. Pur. Agt., F. W. Taylor.
Claim Agt., S. A. Bishop.
Gen. Supt., F. L. Annable.
Supt. Southern Div., O. P. Davis.
Supt. Northern Div., A. C. Bradley.

Supt. Western Div., W. C. White.
Supt. Eastern Div., M. P. Groffholdt.

Supt. Riv. Rialto & Pac. Div., W. J. Bohon.
Supt. Employ., A. R. Dimick.
Mech. Supt., F. F. Small.
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Claim Agt., T. G. Aston.
Gen. Supt. Rys., R. A. Willson.
Supt. Lt. & Pr. System, J. B. Fiskien.
WATERLOO, CEDAR FALLS & NORTHERN RAILWAY CO., *Waterloo, Ia.*
President, L. S. Cass.
Vice-Pres., J. F. Cass.
Secy., F. E. Farwell.
Treas. & Auditor, W. H. Burk.
Gen. Mgr., C. D. Cass.
Supt. Pur. & Stores, Frank McDonald.
Chief Eng., T. E. Rust.
Asst. Eng., C. F. Reaney.
Elec. Eng., G. A. Mills.
Supt., O. S. Lamb.
Supt. Overhead Lines, A. I. Woodring.
Master Mech., W. G. Lamb.
Roadmaster, H. Berend.
Gen. F. & P. Agt., C. M. Cheney.
WAUSAU STREET RAILROAD CO., *Wausau, Wis.*
President, Neal Brown.
Vice-Pres., C. C. Yankee.
Secy.-Treas. & Gen. Mgr., M. C. Ewing.
Auditor, Wm. Anderson.
Supt. Rwy., Nels Rasmussen.
Eng. O. H. Const., R. B. Carter.
WESTCHESTER STREET RAILROAD CO. OF WHITE PLAINS, *White Plains, N. Y.*
President, Howard Elliott.
Vice-Pres., L. S. Storrs.
Secy., A. E. Clark.
Treas., A. S. May.
Auditor, I. A. May.
Gen. Mgr., J. K. Punderford.
Supt., J. H. Calhoun.
Claim Agt., F. E. Lyons.
Traffic Agt., G. Y. Gaillard.
Pur. Agt., J. H. Sanford.
Eng., W. R. Dunham, Jr.
Supervisor of Lines, H. M. Gould.
Ch. Eng. Pwr. & Equip., P. W. Rippel.
Master Mech., Frank Murray.
Roadmaster, S. M. Berrian.
WEST PENN TRACTION CO., *Pittsburgh, Pa.*
President, Samuel Insull.
Vice-Pres., Williston Fish.
Vice-Pres., W. E. Moore.
Vice-Pres., R. B. Keating.

WEST PENN TRACTION Co.—(Continued).

Secy. R. B. Keating.
 Asst. Secy., H. S. Swift.
 Treas., H. S. Swift.
 Gen. Mgr., W. E. Moore.
 Pur. Agt., H. E. Burns.
 Supt. Trans. Terr. A., Daniel Durie.
 Supt. Trans. Terr. B., O. P. Hess.
 Master Mech. Terr. A., Daniel Durie.
 Master Mech., Terr. B., O. P. Hess.

WESTSIDE ELECTRIC STREET RAILWAY Co., *Charlevoix, Pa.*

President, W. I. Berryman.
 Vice-Pres., John C. McKean.
 Secy., R. W. Brown.
 Treas., K. W. Daly.
 Gen. Mgr., C. F. Thompson.
 Gen. Supt., D. G. Calihan.

WESTERN LIGHT & POWER Co., *Boulder, Colo.*

Pres., Guy E. Tripp.
 Vice-Pres., Gen. Mgr. & Pur. Agt., H. U. Wallace.
 Secy. & Treas., John Seager.
 Asst. to Gen. Mgr., A. W. Hahn.
 Local Mgr., H. G. Hard.
 Chief Eng. Pwr. Sta., H. J. Yates.

WESTERN NEW YORK & PENNSYLVANIA TRACTION Co., *Olean, N. Y.*

President, W. R. Page.
 Vice-Pres. & Treas., Jos. B. Mayer.
 Secy., J. P. Quigley.
 Auditor, B. D. Nobles.
 Gen. Mgr., I. W. Miller.
 Gen. F. & P. Agt. & Park Mgr., W. P. Bailey.
 Div. Supt., J. T. Wheeler.
 Div. Supt., A. C. Sloan.
 Elec. Eng., W. K. Page.
 Eng. Pr. Sta., L. D. Cogswell.
 Master Mech., W. K. Page.

WILKES-BARRE & HAZLETON RAILROAD Co., *Hasleton, Pa.*

President, Alvan Markle.
 Vice-Pres. & Gen. Mgr., C. B. Houck.
 Treas., W. H. Remick.
 Secy., N. C. Yost.
 Asst. Secy., A. Markle, Jr.

WILKES-BARRE RAILWAY Co., *Wilkes-Barre, Pa.*

President, Abram Nesbitt.
 Vice-Pres., Mgr. & Pur. Agt., T. A. Wright.
 Secy. & Treas., C. W. Laycock.
 Asst. Secy. & Treas., Wm. S. Bell.
 Supt. Trans., C. F. Crane.
 Mgr. Claim Dept., E. L. Lindemuth.
 Elec. Eng., J. K. Mann.
 Chief Eng. Pr. Sta., W. H. Wheaton.
 Chief Eng. Track & Roadway, E. A. Hoffman.
 Master Mech., E. F. Reese.
 Auditor, T. A. Wright, Jr.

WILLAPA ELECTRIC COMPANY, *Raymond, Wash.*

President, J. S. Thornton.
 Vice-Pres., H. Hobart Porter.
 Secy., J. R. Snider.
 Treas., M. M. Fisher.

WILLAPA ELECTRIC COMPANY—(Continued).

Asst. Secy. & Asst. Treas., Richmond Talbot.

WILLIAMSPORT PASSENGER RAILWAY Co., *Williamsport, Pa.*

President, C. La Rue Munson.
 Vice-Pres., Charles Cochran.
 Gen. Mgr., Ernest H. Davis.
 Secy. & Treas., Jos. W. Cochran, Jr.
 Auditor, H. H. Hill.
 Chief Eng., S. D. Flaugh.
 Supt. of Trans., V. H. Dougherty.

WILMINGTON & PHILADELPHIA TRACTION COMPANY, *Wilmington, Del.*

President, Van Horn Ely.
 Vice-Pres. & Gen. Mgr., Thomas W. Wilson.
 Secy. & Treas., C. N. Ryan.
 Auditor, C. E. Yost.

Gen. Supt., Wm. A. Heindle.
 Supt. Lt. & Pr., A. W. Burke.
 Supt. Trans., H. H. Geiger.
 Claim Agt., A. G. Jack.

WINNIPEG ELECTRIC RAILWAY Co., *Winnipeg, Manitoba.*

President, Sir William MacKenzie.
 Vice-Pres., A. M. Manton.
 Secy. & Treas., F. Morton Morse.
 Auditor, Marwick Mitchell Peet & Co.

Gen. Mgr. & Chief Eng., Wilford Phillips.

Supt., Wilson Phillips.
 Pur. Agt., J. S. MacKenzie.
 Claim Agt., L. Palk.
 Supt. Water Pwr. Plant, Harry E. Phillips.

WISCONSIN ELECTRIC RAILWAY Co., *Oshkosh, Wis.*

President, H. F. Whitcomb.
 Vice-Pres., C. C. Smith.
 Vice-Pres. & Gen. Mgr., J. P. Pulliam.
 Secy., Treas. & Pur. Agt., H. F. Whitcomb, Jr.
 Auditor, F. J. Maxwell.
 Asst. Gen. Mgr., W. J. Kelsh.
 Supt., F. H. Olds.

WISCONSIN-MINNESOTA LIGHT & POWER Co., *Eau Claire, Wis.*

President, Jos. H. Brewer.
 Vice-Pres. & Gen. Mgr., A. E. Pierce.

Local Mgr., A. R. Manley.
 Treas., W. J. Ripley.
 Secy., Blaine Gavett.
 Gen. Supt., H. G. Lawrence.
 Pur. Agt., W. J. Sicard.

WISCONSIN PUBLIC SERVICE Co., *Green Bay, Wis.*

President, Clement C. Smith.
 Vice-Pres., Ludington Patton.
 Vice-Pres., Henry L. Rice.
 Secy. & Treas., Howard Greene.
 Asst. Secy. & Treas., George Allison.
 Gen. Mgr., C. R. Phenicie.
 Asst. Gen. Mgr., Dean Treat.
 Auditor, Miss A. L. Buscher.
 Pur. Agt., L. O. Landaas.

**WISCONSIN RY., LT. & POWER CO.,
Winona, Minn.**

President, Clement C. Smith.
 Vice-Pres., Ludington Patton.
 Secy. & Treas., Howard Greene.
 Asst. Secy. & Asst. Treas., George Allison.
 Auditor, S. M. Rothermel.
 Gen. Mgr., R. M. Howard.
 Supt. Elec. Dept., George Benton.
 Supt. of Trans., C. L. Hedges.
 Chief Eng., & Eng. Pr. Sta., E. H. Kirchner.

**WISCONSIN TRACTION, LIGHT, HEAT &
POWER Co., Appleton, Wis.**

President, John I. Beggs.
 Secy. & Treas., A. K. Ellis.
 Gen. Mgr., John I. Beggs.
 Auditor, J. Vogt.
 Gen. Supt., A. K. Ellis.

**WOODLAWN & SOUTHERN STREET RAIL-
WAY Co., Pittsburgh, Pa.**

President, B. F. Jones, Jr.
 1st Vice-Pres., W. Larimer Jones.
 2d Vice-Pres., A. B. Shepherd.
 Secy. & Treas., W. C. Moreland.
 Asst. Secy., Asst. Treas. and Pur.
 Agt., John L. Moore.
 Supt., J. H. Gano.
 Chief Eng., D. L. McKeel.

**WORCESTER CONSOLIDATED STREET RAIL-
WAY Co., Worcester, Mass.**

President, F. H. Dewey.
 Vice-Pres., C. V. Wood.
 Auditor, J. W. Jamieson.
 Treas., L. Candee.
 Pur. Agt., J. F. McCabe.
 Gen. Mgr., H. C. Page.
 Supt. of Pr. Sta., F. M. Finlayson.
 Master Mech., A. J. McPherson.
 Claim Agt., H. E. Buswell.

YORK RAILWAYS Co., York, Pa.

Pres. & Gen. Mgr., Gordon Campbell.
 Vice-Pres. & Chief Eng., L. C. Mayer.
 Supt., J. E. Wayne.
 Auditor, John J. Landers.
 Treas. & Pur. Agt., E. A. Barnitz.
 Secy., M. G. Stees.
 Supt. Lt. & Pwr., Walter H. Long.
 Claim Agt., J. A. Hooper.
 Master Mech., E. L. Greene.
 Roadmaster, F. M. Bright.
 Park Mgr., F. H. Hartley.

MEMBER COMPANIES OF THE AMERICAN ELECTRIC RAILWAY ASSOCIATION ARRANGED GEOGRAPHICALLY

ALABAMA

Anniston.....Anniston Electric & Gas Co.
 Birmingham.....Birmingham Railway, Light & Power Co.
 Gadsden.....Alabama City, Gadsden & Attalla Railway Co.

ARIZONA

Douglas.....Douglas Traction & Light Co.
 Tucson.....Tucson Rapid Transit Co.

ARKANSAS

Fort Smith.....Fort Smith Light & Traction Co.
 Hot Springs.....Hot Springs Street Railway Co.
 Little Rock.....Little Rock Railway & Electric Co.
 Pine Bluff.....The Pine Bluff Co.
 Texarkana.....Southwestern Gas & Electric Co.

CALIFORNIA

Fresno.....Fresno Traction Co.
 Los Angeles.....Los Angeles Railway Corporation
 Monterey.....Monterey & Pacific Grove Railway Co.
 Oakland.....Oakland, Antioch and Eastern Railway
 Oakland.....San Francisco-Oakland Terminal Railways
 Sacramento.....Pacific Gas & Electric Co.—Sacramento Division
 San Diego.....San Diego Electric Railway Co.
 San Francisco.....United Railroads of San Francisco

COLORADO

Boulder.....The Western Light & Power Co.
 Colorado Springs.....Colorado Springs & Interurban Railway Co.
 Denver.....The Denver Tramway Co.
 Grand Junction.....The Grand River Valley Railway Co.
 Pueblo.....Arkansas Valley Railway, Light & Power Co.
 Trinidad.....Trinidad Electric Transmission, Railway & Gas Co.

CONNECTICUT

Bristol.....The Bristol & Plainville Tramway Co.
 Danbury.....Danbury & Bethel Street Railway Co.
 New Haven.....The Connecticut Co.
 Saybrook.....Shore Line Electric Railway Co.
 Warehousepoint.....Hartford & Springfield Street Railway Co.

DELAWARE

Wilmington.....Wilmington & Philadelphia Traction Co.

DISTRICT OF COLUMBIA

Washington.....The Capital Traction Co.
 Washington.....Washington & Maryland Railway Co.
 Washington.....The Washington & Old Dominion Railroad Co.
 Washington.....Washington-Virginia Railway Co.
 Washington.....Washington Railway & Electric Co.

FLORIDA

Jacksonville.....	Jacksonville Traction Co.
Key West.....	The Key West Electric Co.
Pensacola.....	Pensacola Electric Co.
Tampa.....	Tampa Electric Co.

GEORGIA

Athens.....	Athens Railway & Electric Co.
Atlanta.....	Georgia Railway & Power Co.
Augusta.....	Augusta-Aiken Railway and Electric Corp.
Columbus.....	Columbus Railroad Co.
Macon.....	Macon Railway & Light Co.
Savannah.....	Savannah Electric Co.

ILLINOIS

Aurora.....	Aurora, Elgin & Chicago Railroad Co.
Chicago.....	Chicago Surface Lines
Chicago.....	The Metropolitan West Side Elevated Railway Co.
Dixon.....	Sterling, Dixon & Eastern Electric Railway Co.
East St. Louis.....	East St. Louis & Suburban Railway Co.
Evanston.....	Evanston Railway Co.
Freeport.....	Freeport Railway & Light Co.
Joliet.....	Chicago & Joliet Electric Railway Co.
Kewanee.....	Galesburg & Kewanee Electric Railway Co.
Mattoon.....	Central Illinois Public Service Co.
Ottawa.....	Northern Illinois Light & Traction Co.
Peoria.....	Illinois Traction System
Quincy.....	Quincy Railway Co.
Rockford.....	Rockford & Interurban Railway Co.
Springfield.....	Springfield Consolidated Railway Co.

INDIANA

Anderson.....	Union Traction Co. of Indiana
Beech Grove.....	Beech Grove Traction Co.
Evansville.....	Evansville Railways Co.
Fort Wayne.....	Fort Wayne & Northern Indiana Traction Co.
Indianapolis.....	Indianapolis & Cincinnati Traction Co.
Indianapolis.....	Indianapolis Traction & Terminal Co.
Indianapolis.....	Interstate Public Service Co.
Indianapolis.....	Terre Haute, Indianapolis & Eastern Traction Co.
Kendallville.....	Fort Wayne & Northwestern Railway Co.
Kokomo.....	Indiana Railways & Light Co.
Michigan City....	The Chicago, Lake Shore & South Bend Railway Co.
New Albany.....	Louisville & Southern Indiana Traction Co.
Portland.....	The Muncie & Portland Traction Co.
South Bend....	Chicago, South Bend & Northern Indiana Railway Co.

IOWA

Cedar Rapids.....	Iowa Railway & Light Co.
Cedar Rapids.....	Cedar Rapids & Marion City Railway Co.
Centerville.....	Centerville, Albia & Southern Railway Co.
Clinton.....	Clinton Street Railway Co.
Davenport.....	Tri-City Railway Co.
Des Moines.....	Des Moines City Railway Co.
Des Moines.....	Inter-Urban Railway Co.

Dubuque.....	Union Electric Co.
Iowa City.....	Mississippi Valley Electric Co.
Keokuk.....	Keokuk Electric Co.
Mason City.....	Mason City & Clear Lake Railroad Co.
Ottumwa.....	Ottumwa Railway & Light Co.
Sioux City.....	Sioux City Service Co.
Waterloo.....	Waterloo, Cedar Falls & Northern Railway Co.

KANSAS

Bonner Springs.....	Kansas City, Kaw Valley & Western Railway Co.
Hutchinson.....	The Hutchinson Interurban Railway Co.
Junction City.....	Union Light & Power Co.
Lawrence.....	Lawrence Railway & Light Co.
Overland Park.....	Missouri & Kansas Interurban Railway Co.
Pittsburg.....	Joplin & Pittsburg Railway Co.
Topeka.....	The Topeka Railway Co.
Wichita.....	Arkansas Valley Interurban Railway Co.

KENTUCKY

Covington.....	South Covington & Cincinnati Street Railway Co.
Lexington.....	Kentucky Traction & Terminal Co.
Louisville.....	Louisville Railway Co.
Maysville.....	Maysville Street Railroad & Transfer Co.
Paducah.....	The Paducah Traction Co.

LOUISIANA

Baton Rouge.....	Baton Rouge Electric Co.
New Orleans.....	New Orleans Railway & Light Co.

MAINE

Bangor.....	Bangor Railway & Electric Co.
Kennebunk.....	Atlantic Shore Railway
Portland.....	Cumberland County Power and Light Co.
Rockland.....	Rockland, Thomaston & Camden Street Railway Co.

MARYLAND

Annapolis.....	The Maryland Electric Railways Co.
Baltimore.....	The United Railways & Electric Company of Baltimore
Baltimore...	Washington, Baltimore & Annapolis Electric Railroad Co.
Cumberland.....	Cumberland & Westernport Electric Railway Co.
Cumberland.....	Cumberland Electric Railway Co.

MASSACHUSETTS

Boston.....	Bay State Street Railway Co.
Boston.....	Boston Elevated Railway Co.
Boston.....	Boston & Worcester Street Railway Co.
Fitchburg.....	Fitchburg & Leominster Street Railway Co.
Haverhill.....	Massachusetts Northeastern Street Railway Co.
Holyoke.....	Holyoke Street Railway Co.
Lynn.....	Nahant & Lynn Street Railway Co.
Maynard.....	Concord, Maynard & Hudson Street Railway Co.
Milford.....	Milford & Uxbridge Street Railway Co.
New Bedford.....	Union Street Railway Co.

Newtonville.....	Middlesex & Boston Street Railway Co.
Pittsfield.....	Berkshire Street Railway Co.
Plymouth.....	Brockton & Plymouth Street Railway Co.
Springfield.....	Springfield Street Railway Co.
Swansea Center.....	Providence & Fall River Street Railway Co.
Worcester.....	Worcester Consolidated Street Railway Co.

MICHIGAN

Benton Harbor.....	Benton Harbor-St. Joe Railway & Light Co.
Detroit.....	Detroit United Railway
Escanaba.....	Escanaba Traction Co.
Grand Rapids..	Grand Rapids, Grand Haven & Muskegon Railway Co.
Grand Rapids.....	Grand Rapids Railway Co.
Houghton.....	Houghton County Traction Co.
Ishpeming.....	Marquette County Gas & Electric Co.
Jackson.....	Michigan Railway Co.
Menominee.....	Menominee & Marinette Light & Traction Co.
Muskegon.....	Muskegon Traction & Lighting Co.
Saginaw.....	Saginaw-Bay City Railway Co.

MINNESOTA

Breckenridge.....	Wahpeton-Breckenridge Street Railway Co.
Duluth.....	The Duluth Street Railway Co.
Minneapolis.....	Twin City Rapid Transit Co.
St. Cloud.....	Granite City Railway Co.
Virginia.....	Mesaba Railway Co.
Winona.....	Wisconsin Railway, Light & Power Co.

MISSISSIPPI

Hattiesburg.....	Hattiesburg Traction Co.
Jackson.....	Jackson Light & Traction Co.
Meridian.....	Meridian Light & Railway Co.
Vicksburg.....	Vicksburg Light & Traction Co.

MISSOURI

Kansas City.....	Kansas City, Clay County & St. Joseph Railway Co.
Kansas City.....	Kansas City Railway & Light Co.
Kansas City.....	The Missouri & Kansas Interurban Ry. Co.
St. Joseph.....	St. Joseph Railway, Light, Heat & Power Co.
St. Louis.....	United Railways Company of St. Louis
Sedalia.....	City Light and Traction Co. of Sedalia
Springfield.....	Springfield Traction Co.

MONTANA

Butte.....	Butte Electric Railway Co.
Great Falls.....	The Montana Power Co., Street Railway Branch
Helena.....	Helena Light & Railway Co.
Missoula.....	Missoula Street Railway Co.

NEBRASKA

Lincoln.....	Omaha, Lincoln & Beatrice Railway Co.
Omaha.....	Omaha & Council Bluffs Street Railway Co.

NEW HAMPSHIRE

Manchester.....	Manchester Street Railway Co.
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NEW JERSEY

Asbury Park.....	Atlantic Coast Electric Railroad Co.
Bridgeton.....	Bridgeton & Millville Traction Co.
Hohokus.....	North Jersey Rapid Transit Co.
Keyport.....	Jersey Central Traction Co.
Millville.....	Millville Traction Co.
Morristown.....	Morris County Traction Co.
Newark.....	Public Service Railway Co.
Trenton.....	New Jersey and Pennsylvania Traction Co.
Trenton.....	Trenton & Mercer County Traction Corporation

NEW MEXICO

Las Vegas.....	Las Vegas Transit Co.
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NEW YORK

Albany.....	United Traction Co.
Beacon.....	Fishkill Electric Railway Co.
Binghamton.....	Binghamton Railway Co.
Brooklyn.....	Brooklyn Heights Railroad Co.
Buffalo.....	International Railway Co.
Cooperstown.....	Otsego & Herkimer Railroad Co.
Elmira.....	Elmira, Corning & Waverly Railway Co.
Elmira.....	Elmira Water, Light & Railroad Co.
Glens Falls.....	Hudson Valley Railway Co.
Gloversville.....	Fonda, Johnstown & Gloversville Railroad Co.
Hornell.....	Hornell Traction Co.
Huntington.....	Huntington Railroad Co.
Ithaca.....	Ithaca Traction Corporation
New Brighton.....	Richmond Light & Railroad Co.
New York.....	Hudson & Manhattan Railroad Co.
New York.....	Interborough Rapid Transit Co.
New York.....	Manhattan & Queens Traction Corp.
New York.....	Third Avenue Railway Co.
Olean.....	Western New York & Pennsylvania Traction Co.
Ossining.....	Peekskill Lighting & Railroad Co.
Portchester.....	New York & Stamford Railway Co.
Poughkeepsie.....	Poughkeepsie City & Wappingers Falls Electric Railway Co.
Rochester.....	New York State Railways
Schenectady.....	Schenectady Railway Co.
Seneca Falls.....	Geneva, Seneca Falls & Auburn Railroad Co., Inc.
Syracuse.....	Empire United Railways, Inc.
Syracuse.....	Syracuse & Suburban Railroad Co.
Watertown.....	Black River Traction Co.
White Plains.....	The Westchester Street Railroad Co.

NORTH CAROLINA

Asheville.....	Asheville & East Tennessee Railroad
Asheville.....	Asheville Power & Light Co.
Charlotte.....	Southern Public Utilities Co.
Durham.....	Durham Traction Co.
Greensboro.....	The North Carolina Public Service Co.
Wilmington.....	Tidewater Power Co.

Fargo.....	Fargo & Moorhead Street Railway Co.
Grand Forks.....	Grand Forks Street Railway Co.

Akron.....	Northern Ohio Traction & Light Co.
Cincinnati.....	Cincinnati, Lawrenceburg & Aurora Electric Street Railroad Co.
Cincinnati.....	The Cincinnati Traction Co.
Cleveland.....	Cleveland & Eastern Traction Co.
Cleveland.....	The Cleveland Railway Co.
Cleveland.....	Cleveland, Southwestern & Columbus Railway Co.
Columbus.....	Columbus Railway, Power & Light Co.
Columbus.....	The Scioto Valley Traction Co.
Dayton.....	The Dayton, Springfield & Xenia Southern Railway Co.
Dayton.....	The People's Railway Co.
Sandusky.....	Lake Shore Electric Railway Co.
Springfield.....	The Ohio Electric Railway Co.
Springfield.....	The Springfield Railway Co.
Springfield.....	The Springfield, Troy & Piqua Railway Co.
Stuebenville.....	Stuebenville and East Liverpool Railway & Light Co.
Tippecanoe City.....	The Dayton & Troy Electric Railway Co.
Toledo.....	The Northwestern Ohio Railway & Power Co.
Toledo.....	Toledo Railways & Light Co.
West Milton.....	Dayton, Covington & Piqua Traction Co.
Willoughby.....	The Cleveland, Painesville & Eastern Railroad Co.
Youngstown.....	Mahoning & Shenango Railway & Light Co.
Zanesville.....	The Southeastern Ohio Railway, Light & Power Co.

Muskogee.....	Muskogee Electric Traction Co.
Oklahoma City.....	Oklahoma Railway Co.
Shawnee.....	Shawnee-Tecumseh Traction Co.

Portland.....Portland Railway, Light & Power Co.

Allentown.....	Lehigh Valley Transit Co.
Altoona.....	Altoona & Logan Valley Electric Railway Co.
Butler.....	Pittsburgh & Butler Street Railway Co.
Charleroi.....	Westside Electric Street Railway Co.
Doylestown.....	Philadelphia & Easton Electric Railway Co.
Erie.....	Buffalo & Lake Erie Traction Co.
Harrisburg.....	Harrisburg Railways Co.
Hazleton.....	Wilkes-Barre & Hazleton Railroad Co.
Lancaster.....	Conestoga Traction Co.
Lewistown.....	The Lewistown & Reedsville Electric Railway Co.
Mauch Chunk.....	Carbon Transit Co.
Meadville.....	Northwestern Pennsylvania Railway Co.
Oil City.....	The Citizens' Traction Co.
Pen Argyl.....	Slate Belt Electric Street Railway Co.
Philadelphia.....	Philadelphia & West Chester Traction Co.
Philadelphia.....	Philadelphia Rapid Transit Co.

Philadelphia.....	Trenton, Bristol & Philadelphia Street Railway Co.
Philipsburg.....	Centre & Clearfield Street Railway Co.
Pittsburgh.....	Pittsburgh Railways Co.
Pittsburgh.....	West Penn Traction Co.
Pittsburgh.....	Woodlawn & Southern Street Railway Co.
Pottsville.....	Eastern Pennsylvania Railways Co.
Reading.....	Reading Transit & Light Co.
Scranton.....	Lackawanna & Wyoming Valley Railroad Co.
Scranton.....	The Scranton & Binghamton Traction Co.
Scranton.....	Scranton Railway Co.
Upper Darby.....	Philadelphia & Western Railway Co.
Warren.....	Warren & Jamestown Street Railway Co.
Wilkes-Barre.....	Wilkes-Barre Railway Co.
Williamsport.....	Williamsport Passenger Railway Co.
York.....	York Railways Co.

RHODE ISLAND

Providence.....	The Rhode Island Co.
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SOUTH CAROLINA

Charleston.....	Charleston Consolidated Railway & Lighting Co.
Charleston.....	Charleston-Isle of Palms Traction Co.
Spartanburg.....	South Carolina Light, Power & Railways Co.

SOUTH DAKOTA

Sioux Falls.....	Sioux Falls Traction System
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TENNESSEE

Chattanooga.....	Chattanooga Railway & Light Co.
Johnson City.....	Johnson City Traction Corp.
Knoxville.....	Knoxville Railway & Light Co.
Memphis.....	The Memphis Street Railway Co.
Nashville.....	Nashville Railway & Light Co.

TEXAS

Amarillo.....	Amarillo Street Railway Co.
Austin.....	Austin Street Railway Co.
Beaumont.....	Beaumont Traction Co.
Dallas.....	Dallas Consolidated Electric Street Railway Co.
Dallas.....	Texas Traction Co.
El Paso.....	El Paso Electric Railway Co.
Fort Worth.....	Northern Texas Traction Co.
Galveston.....	Galveston Electric Co.
Houston.....	Houston Electric Co.
Paris.....	Paris Transit Co.
Port Arthur.....	Port Arthur Traction Co.
San Antonio.....	San Antonio Traction Co.

UTAH

Ogden.....	Ogden, Logan & Idaho Railway Co.
Salt Lake City.....	Emigration Canyon Railroad Co.
Salt Lake City.....	Salt Lake & Ogden Railway Co.
Salt Lake City.....	Salt Lake & Utah Railroad Co.
Salt Lake City.....	Utah Light & Traction Co.

VERMONT

Montpelier.....Barre & Montpelier Traction & Power Co.
 Brattleboro.....Twin State Gas & Electric Co.
 St. Albans.....St. Albans & Swanton Traction Co.

VIRGINIA

Charlottesville.....Charlottesville & Albermarle Railway Co.
 Danville.....Danville Traction & Power Co.
 Hampton....Newport News & Hampton Railway, Gas & Electric Co.
 Lynchburg.....Lynchburg Traction & Light Co.
 Richmond.....Richmond & Rappahannock River Railway Co.
 Richmond.....Virginia Railway & Power Co.
 Roanoke.....Norfolk & Western Railway
 Roanoke.....Roanoke Railway & Electric Co.

WASHINGTON

Aberdeen.....Gray's Harbor Railway & Light Co.
 Everett.....Everett Railway, Light & Water Co.
 Olympia.....Olympia Light & Power Co.
 Raymond.....Willapa Electric Co.
 Seattle....Puget Sound Traction, Light & Power Co., Seattle Division
 Spokane.....The Washington Water Power Co.
 Tacoma.....Tacoma Railway & Power Co.

WEST VIRGINIA

Bluefield.....Appalachian Power Co.
 Bluefield.....Norfolk & Western Railway Co.
 Charleston.....Charleston-Dunbar Traction Co.
 Charleston.....Charleston Interurban Railroad Co.
 Fairmount.....Fairmount & Mannington Railroad Co.
 Huntington.....Ohio Valley Electric Railway Co.
 Wellsburg.....Steubenville, Wellsburg & Weirton Railway

WISCONSIN

Appleton.....Wisconsin Traction, Light, Heat & Power Co.
 Eau Claire.....Wisconsin-Minnesota Light & Power Co.
 Green Bay.....Wisconsin Public Service Co.
 Milwaukee.....The Milwaukee Electric Railway & Light Co.
 Oshkosh.....Wisconsin Electric Railway Co.
 Sheboygan.....Sheboygan Railway & Electric Co.
 Wausau.....Wausau Street Railroad Co.

PANAMA

Panama.....Panama Tramways Co.

PHILIPPINE ISLANDS

Manila.....Manila Electric Railroad & Light Co.

HAWAII

Honolulu.....Honolulu Rapid Transit & Land Co.

MEMBERS (INDIVIDUAL)

(Arranged Alphabetically.)

§ Allied with American Association.

* Allied with Accountants' Association.

† Allied with Transportation and Traffic Association.

‡ Allied with Claims Association.

** Indicates that individual holds membership in more than one Affiliated Association.

Those not referenced are allied with Engineering Association.

HONORARY MEMBERS ACCOUNTANTS' ASSOCIATION

- Brockway, W. B., Portland, Me. Smith, F. W., Ft. Myers, Fla.
- Abbe, Harry A., Electrical Engineer,
Syracuse & Suburban Railroad Co.,
Manlius, N. Y.
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- Aertsen, Guillaem, The Midvale Steel
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Roebing's Sons Co., Cincinnati,
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- Ahern, Elmer W., Draughtsman, Wash-
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- *Williams, H. R., Motorman, The Denver Tramway Co., Denver, Colo.
- Williams, J. A., Motorman, The Denver Tramway Co., Denver, Colo.
- Williams, L. A., Flood & Conklin Co., Newark, N. J.
- *Williams, R. T., Assistant Supervisor, Public Service Railway Co., Jersey City, N. J.
- Williams, R. W., Draftsman, Way and Structures Department, Washington Railway & Electric Co., Washington, D. C.
- Williams, R. W., Representative, Westinghouse Traction Brake Co., National Brake & Electric Co., Atlanta, Ga.
- Williams, Thos. C., Car House Foreman, Washington Railway & Electric Co., Washington, D. C.
- Williams, T. W., Carnegie Steel Co., General Sales Department, Pittsburgh, Pa.
- Williams, W. P., Brooklyn Rapid Transit System, Brooklyn, N. Y.
- *Willingham, E., Conductor, The Denver Tramway Co., Englewood, Colo.
- *Willis, Alex. E., Metropolitan West Side Elevated Railway Co., Chicago, Ill.
- Willits, J. M., Salesman, Joseph Dixon Crucible Co., Philadelphia, Pa.
- Wilson, A. M., Portland, Ore.
- Wilson, Ben., American Car & Foundry Co., New York, N. Y.
- *Wilson, Edward, Motorman, Public Service Railway Co., Elizabeth, N. J.
- Wilson, F. W., Salesman, Standard Underground Cable Co., San Francisco, Cal.
- §Wilson, H. L., Treasurer, Boston Elevated Railway Co., Boston, Mass.
- Wilson, H. M., Vice-President, The McGraw Publishing Co., New York, N. Y.
- Wilson, Jacob, General Manager, The Adjustable Sash Lock Co., Atlantic City, N. J.
- Wilson, J. McNaul, Wilson Remover Co., Newark, N. J.
- *Wilson, J. O., Treasurer & General Passenger Agent, Cleveland, Southwestern & Columbus Railway Co., Cleveland, Ohio.
- Wilson, J. Whitney, Representative Railway Department, Wilson Remover Co., Newark, N. J.
- Wilson, Leonard, Consulting Engineer, Salt Lake City & Ogden Railway Co., Salt Lake City, Utah.
- Wilson, R. C., Salesman, Safety Insulated Wire & Cable Co., New York, N. Y.
- Wilson, Robert L., Superintendent Railway Department, Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa.
- Wilson, S. M., Advertising Manager, The J. G. Brill Co., Philadelphia, Pa.
- *Wilson, Thos., Inspector, Public Service Railway Co., Jersey City, N. J.
- *Wilson, T. W., General Manager, Wilmington & Philadelphia Traction Co., Wilmington, Del.
- Wilson, Wm. C., District Sales Agent, Wm. Wharton, Jr., & Co., Inc., New York, N. Y.
- Winger, S. D., Prest-O-Lite Co., Chicago, Ill.
- Winn, Fred. H., Master Mechanic, Blue Hill Street Railway Co., Canton, Mass.
- Winsor, P., Chief Engineer Motive Power & Rolling Stock, Boston, Elevated Railway Co., Boston, Mass.
- †Winters, W. E., Assistant to Claim Agent, Public Service Railway Co., Newark, N. J.
- *Wisch, P. Edward, President, P. Edward Wisch Service Co., New York, N. Y.
- Wivel, H. W., Salesman, Du Pont Fabrikoid Co., Wilmington, Del.
- Woernley, H. F., Assistant Chief Engineer, Westinghouse Traction Brake Co., Pittsburgh, Pa.
- Wolff, Augustus, Superintendent Motive Power, United Railway & Electric Co., Baltimore, Md.
- Wolff, Robert, Inspector, Public Service Railway Co., Newark, N. J.
- Wolff, William, Foreman Paint Shop, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.
- Woltman, Ernst, A. & J. M. Anderson, Manufacturing Co., Chicago, Ill.
- Wood, B. F., Chief Engineer, United Gas & Electrical Engineering Corp., New York City.
- Wood, C. L., New York Switch & Crossing Co., Hoboken, N. J.
- Wood, Charles N., Charles N. Wood Co., Boston, Mass.
- *Wood, C. R., Conductor, The Denver Tramway Co., Denver, Colo.
- Wood, E. C., Vice-President, Mica Insulator Co., New York, N. Y.
- *Wood, F. T., Assistant General Manager, New York Railways Co., New York, N. Y.
- Wood, Robt. C., Public Service Commission for First District of New York, N. Y.
- *Wood, W., Service Inspector, Metropolitan West Side Elevated Railway Co., Chicago, Ill.

- §Wood, W. O., President, New York & Queens County Railway Co., New York, N. Y.
- Woodbridge, J. E., Resident Engineer, Ford, Bacon & Davis, San Francisco, Cal.
- Woodin, W. H., Assistant President, American Car & Foundry Co., New York, N. Y.
- *Woodman, Franklin, General Manager, Northeastern Massachusetts Street Railway Co., Haverhill, Mass.
- Woodmansee, Fay, Consulting Engineer, Woodmansee & Davidson, Inc., Chicago, Ill.
- Woodnutt, C. P., Cadet Engineer, Public Service Railway Co., Newark, N. J.
- Woodruff, E. C., Professor Electric Engineering, State College, Penna.
- Woods, Robert P., Consulting Engineer Board of Control, Metropolitan Street Railway Co., Kansas City, Mo.
- *Woodsome, J. C., Manager, Tampa Electric Co., Tampa, Fla.
- Woodward, Arthur, President, International Register Co., Chicago, Ill.
- Woollen, Alex. H., Engineer Railway Department, Stone & Webster Engineering Corporation, Boston, Mass.
- Wright, C., Sales Department, American Brake Shoe & Foundry Co., Chicago, Ill.
- Wright, John B., Westinghouse Traction Brake Co., Pittsburgh, Pa.
- Wright, J. W., Roadmaster, Public Service Railway Co., Elizabeth, N. J.
- Wright, Roy V., Managing Editor, Simmons Boardman Publishing Co., New York, N. Y.
- Wright, W. D., Superintendent of Equipment, Rhode Island Co., Providence, R. I.
- Wright, W. H., Division General Foreman, Public Service Railway Co., Camden, N. J.
- *Wunderlich, Harry, Station Clerk, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.
- *Wyman, A. W., Trainmaster, Metropolitan West Side Elevated Railway Co., Chicago, Ill.
- †Wynne, L. F., Claim Agent, Georgia Railway & Power Co., Atlanta, Ga.
- Wysor, W. W., Chief Engineer, Lehigh Valley Transit Co., Allentown, Pa.
- Yardley, C. B., Jr., Railroad Representative, Jenkins Brothers, New York, N. Y.
- Yardley, J. H., Vice-President, National Car Wheel Co., Philadelphia, Pa.
- Yarnall, V. S., Special Agent, Carnegie Steel Co., Pittsburgh, Pa.
- *Yaunt, D. G., Chicago, Ill.
- Ycasiano, F. R., Mechanical Engineer, Bureau of Science, Manila, P. I.
- Yeomans, George S., Draftsman, Public Service Railway Co., West Orange, N. J.
- Yereance, W. B., Consulting Engineer, New York, N. Y.
- Yoder, J. D., Harrison Safety Boiler Works, Philadelphia, Pa.
- §York, L. D., President, Portsmouth Street Railroad & Light Co., Portsmouth, O.
- †Young, Arthur, Certified Public Accountant, Arthur Young & Co., Chicago, Ill.
- Young, C. G., Consulting Engineer, Bankers Trust Building, New York, N. Y.
- Young, Herman, Inspection Foreman, Metropolitan West Side Elevated Railway Co., Chicago, Ill.
- †Young, P. S., Treasurer, Public Service Railway Co., Newark, N. J.
- Yount, J. M., Master Mechanic, United Railroads of San Francisco, San Francisco, Cal.
- Zeleny, Edwin, Power Supervisor, Metropolitan West Side Elevated Railway Co., Chicago, Ill.
- Zell, Chas. J., Superintendent, Alabama City, Gadsden & Attalla Railway Co., Gadsden, Ala.
- Zieber, C. W., Salesman, Globe Ticket Co., Philadelphia, Pa.
- Zimmerman, Chas. E., Motorman, Public Service Railway Co., Rutherford, N. J.
- *Zoerner, C. E., Train Dispatcher, Interborough Rapid Transit Co., Mt. Vernon, N. Y.
- Zuehlke, E. F., General Superintendent, Escanaba Traction Co., Escanaba, Mich.

MEMBER COMPANIES—AMERICAN ELECTRIC RAILWAY MANUFACTURERS' ASSOCIATION.

Abrahams & Co., S.	Burdette-Rowntree Mfg. Co.
Acme Supply Co.	Cambria Steel Co.
Adams & Westlake Co., The	Cameron Electrical Manufacturing Co., The
Alcott, Edward	Canadian Railway & Marine World
Allen & Peck, Inc'd	Carnegie Steel Co.
Allis-Chalmers Manufacturing Co.	Chattanooga Armature Works
Alloy Steel Forging Co.	Cheatham Electric Switching Device Co.
Alston Saw & Steel Co.	Chicago Pneumatic Tool Co.
Aluminum Co. of America	Chicago Varnish Co.
American Abrasive Metals Co.	Cincinnati Car Co., The
American Brake Co., The	Cleveland Fare Box Co.
American Brake Shoe & Foundry Co.	Cleveland Frog & Crossing Co.
American Brass Co., Ansonia	Coe Mfg. Co., W. H.
Brass & Copper Branch	Columbia Machine Works & Malleable Iron Co., The
American Carbon & Battery Co.	Consolidated Car Fender Co.
American Car & Foundry Co.	Consolidated Car Heating Co.
American Creosoting Co.	Continuous Rail Co.
American Electrical Works	Cooper Heater Co., The
American Engineering Company	Corliss Carbon Co.
American Mason Safety Tread Co.	Crocker-Wheeler Co.
American Railway Guide Company	Crouse-Hinds Co.
American Railway Supply Co.	Curtain Supply Co., The
American Steel & Wire Co.	Cutter Electrical & Mfg. Co., The
Anderson Manufacturing Co., A. & J. M.	D. & W. Fuse Co.
Archbold-Brady Co.	Dayton Fare Recorder Co., The
Atlas Railway Supply Co.	Dayton Mfg. Co., The
Automatic Ventilator Co.	Dearborn Chemical Co.
Atlantic Welding Corporation	Detroit Graphite Co.
Badger Fire Extinguisher Co.	Devoe, F. W., & C. T. Reynolds Co.
Baldwin Locomotive Works, The	Dilworth-Porter & Co., Ltd.
Barbour-Stockwell Co.	Dixon Crucible Co., Joseph, The
Bayonet Trolley Harp Co.	Dossert & Co.
Bemis Truck Co.	Drew Electric & Mfg. Co.
Bishop Gutta-percha Co.	Drouve Co., G., The
Brady Brass Co.	Duff Manufacturing Co., The
Bridgeport Brass Co.	Dupont Fabrikoid Co.
Brill Co., The J. G.	Eclipse Railway Supply Co., The
Brookfield Glass Company	Edwards, O. M. Co., Inc'd., The
Bronze Metal Co.	Elastic Car Waste Co.
Buckeye Electric Division National Lamp Works of General Electric Company, The	Electric Cable Co., The
Buda Company, The	Electric Railway Equipment Co.

- Electric Railway Improvement Co., The
 Electric Railway Journal
 Electric Service Supplies Co.
 Electric Storage Battery Co., The
 Electric Traction
 Electrical Review Publishing Co., Inc'd.
 Electro-Mechanical Brake Co., Ltd.
 Ellicon Co., The
 Elliot Frog & Switch Co.
 Eppinger & Russell Co.
 Este Co., The J. D.
 Esterline Co., The
 Eureka Co., The
 Falk Co., The
 Federal Signal Co.
 Fibre Conduit Co., The
 Flexible Compound Co., Inc'd, The
 Flint Varnish Works
 Flood & Conklin Co.
 Forged Steel Wheel Co.
 Franklin Electric & Mfg. Co., The
 Fuller Oil & Supply Co.
 Galena-Signal Oil Co.
 General Electric Co.
 General Railway Signal Co.
 General Vehicle Co., Inc'd
 Gest, G. M.
 Globe Ticket Co.
 Gold Car Heating & Lighting Co.
 Goldschmidt Thermit Co.
 Grayson Railway Supply Co.
 Green Engineering Co.
 Griffin Wheel Co.
 Gulick-Henderson Co.
 Hale & Kilburn Co., The
 Harrison Safety Boiler Works
 Hemingray Glass Co.
 Heywood Bros. & Wakefield Co.
 Hildreth Varnish Co.
 Home Rubber Co.
 Howard & Co., James L.
 Hubbard & Co.
 Hunt Co., C. W., Inc.
 Hunter Illuminated Car Sign Co., The
 Imperial Car Cleaner Co.
 Independent Lamp & Wire Co.
 Independent Pneumatic Tool Co.
 Indianapolis Switch & Frog Co.
 International Register Co., The
 International Steel Tie Co., The
 Index Visible, Inc.
 Jeandron, W. J.
 Jennison-Wright Co., The
 Jewett Car Co., The
 Johns-Manville Co., H. W.
 Johnson Coin Counting Machine Co.
 Johnson Fare-Box Co.
 Jones & Laughlin Steel Co.
 Keith Car & Manufacturing Co.
 Kerite Insulated Wire & Cable Co.
 W. R. Kerschner Co., Inc'd
 Keystone Grinder & Mfg. Co.
 Kinnear Mfg. Co., The
 Koury Co., Limited, C. M.
 Kuhlman Car Co., The G. C.
 Lackawanna Steel Co.
 Laconia Car Co.
 Long Co., E. G.
 Lord Manufacturing Co.
 Lorain Steel Co., The
 MacGovern & Co., Inc'd
 MacRae's Blue Book Co.
 McGraw Publishing Co., Inc.
 McGuire-Cummings Mfg. Co.
 McQuay-Norris Mfg. Co.
 Marburg Bros., Inc.
 Mason Co., E. R.
 Mica Insulator Co.
 Midvale Steel Co., The
 Morden Frog & Crossing Works
 Morgan Crucible Co., Ltd., The
 More-Jones Brass & Metal Co.
 Murphy Varnish Co.
 Nachod Signal Co., Inc.
 National Brake Co., Inc.
 National Brake & Electric Co.
 National Car Wheel Co.
 National Carbon Co.
 National Conduit & Cable Co.
 National Lead Co.
 National Lock Washer Co.
 National Pneumatic Co.
 National Tube Co.
 Naugle Pole & Tie Co.
 Nelson Valve Co.
 New England Street Railway Club
 New Haven Trolley Supply Co.
 Newman Clock Co.
 New York Air Brake Co.
 New York Switch & Crossing Co.
 Niles-Bement-Pond Co.
 Niles Car & Mfg. Co., The
 Norton Grinding Co.

- Nungesser Carbon & Battery Co.
 Nuttall Co., R. D.
 Ohio Brass Co., The
 Ohmer Fare Register Co.
 Okonite Co., The
 Osgood-Bradley Car Co.
 Pantasote Co., The
 Parrish, Phillips & Co.
 Patton Paint Co.
 Pennsylvania Steel Co., The
 Philadelphia Holding Co.
 Pierson, Roeding & Co.
 Pittsburgh Steel Co., The
 Pocket List of Railroad Officials
 Pollak Steel Co., The
 Poole Bros.
 Post & Co., Inc'd, E. L.
 Pratt & Lambert, Inc'd.
 Pressed Steel Car Co.
 Prest-O-Lite Co., Inc., The
 Pyrene Mfg. Co.
 Q. & C. Co.
 Rail Joint Co., The
 Railway Audit & Inspection Co.
 Railway Improvement Co.
 Railway & Industrial Engineering Co.
 Railway Materials Co., The
 Railway Roller Bearing Co.
 Railway Track-work Co.
 Railway Utility Co.
 Ramapo Iron Works
 Rand-Avery Supply Co.
 Rand, McNally & Co.
 Ridlon Co., Frank
 Roebling's Sons Co., John A.
 Rooke Automatic Register Co.
 Russell Car & Snow Plow Co.
 Safety Insulated Wire & Cable Co.
 Samson Cordage Works
 Sangamo Electric Co.
 Sattley Coin Handling Machine Co.
 Schutte & Koerting Co.
 Seymour Portable Rail Grinder, The
 Sherwin-Williams Co., The
 Simmen Automatic Railway Signal Co., The
 Simmons-Boardman Publishing Co.
 S. K. F. Ball Bearing Co., The
 Smith Heater Co., The Peter
 Smith-Ward Brake Co., Inc.
 Southern Car Co.
 Southern Exchange Co., The
 Southern Wheel Co.
 Speer Carbon Co.
 Standard Motor Truck Co.
 Standard Paint Co., The
 Standard Steel Works Co.
 Standard Underground Cable Co.
 Standard Varnish Works.
 Star Brass Works, The
 Sterling Varnish Co., The
 Stewart-Hartshorn Co.
 Street Railways Advertising Co.
 St. Louis Car Co.
 St. Louis Steel Foundry Company
 St. Louis Surfacers & Paint Co.
 Symington Co., The T. H.
 Taylor Electric Truck Co.
 Templeton, Kenly & Co., Limited.
 Thayer & Co., Inc'd
 Thew Automatic Shovel Co., The
 Thiel Detective Service Co., The
 Thomas & Sons, The R.
 Tool Steel Gear & Pinion Co., The
 Transportation Utilities Co.
 Trigger-Lock Reversible Controller Finger, The
 Trolley Supply Co., The
 Union Electric Co.
 Union Switch & Signal Co., The
 United States Electric Signal Co.
 United States Graphite Co., The
 United States Wood Preserving Co.
 Universal Car & Manufacturing Co., Inc.
 Universal Lubricating Co.
 Universal Safety Tread Co.
 Universal Trolley Wheel Co.
 U. S. Metal & Mfg. Co.
 Vacuum Car Ventilating Co.
 Valentine & Co.
 Van Dorn Coupler Co., Inc'd
 Van Dorn & Dutton Co., The
 Waclark Wire Co., The
 Wallace Supplies Manufacturing Company
 Walpole Tire & Rubber Co.
 Wason Mfg. Co.
 Wason Engineering & Supply Co.
 Watson-Stillman Co.
 Wendell & MacDuffie Co.
 Western Electric Co.
 Westinghouse-Church-Kerr & Co.

Westinghouse Electric & Mfg. Co.	Whitmore Mfg. Co.
Westinghouse Machine Co., The	Whittier Mills Co.
Westinghouse Traction Brake Co.	Wilson Remover Co.
Weston Electrical Instrument Co.	Wisch Service, Inc., The P. Edward.
Wharton Jr. & Co., Inc'd, Wil- liam	Wood Co., Charles N.
Wheel Truing Brake Shoe Co.	Woods & Co., Edwin S.
Wheeler Condenser & Engineer- ing Co.	Wyoming Shovel Works, The
White Engineering Corporation, The J. G.	Yale & Towne Manufacturing Co.
	Yarnall-Waring Co.

STATISTICS
OF THE
ELECTRIC RAILWAYS
OF THE
UNITED STATES
COMPILED BY THE
BUREAU OF FARE RESEARCH

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ELECTRIC RAILWAY STATISTICS

COMPILED FROM THE REPORTS OF THE UNITED STATES
BUREAU OF THE CENSUS BY THE BUREAU OF FARE
RESEARCH

GEOGRAPHICAL GROUPS

The following grouping of States is used in the tables contained in this appendix:

New England.—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

Middle Atlantic.—New York, New Jersey, Pennsylvania.

East North Central.—Ohio, Indiana, Illinois, Michigan, Wisconsin.

West North Central.—Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

South Atlantic.—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

East South Central.—Kentucky, Tennessee, Alabama, Mississippi.

West South Central.—Arkansas, Louisiana, Oklahoma, Texas.

Mountain.—Montana, Colorado, Idaho, Wyoming, Utah, Nevada, New Mexico, Arizona.

Pacific.—Washington, Oregon, California.

TABLE NO. I.—CONDENSED TABLE OF STATISTICS OF THE ELECTRIC
RAILWAYS OF THE UNITED STATES

Compiled by the United States Bureau of the Census

	1912	1907	1902	Per cent of in- crease: ¹ 1902-1912
Number of companies.....	1,260	1,236	987	27.7
Operating.....	975	945	817	19.3
Lessor.....	285	291	170	67.6
Miles of line.....	30,437.86	25,547.19	16,645.34	82.9
Miles of single track ²	41,064.82	34,381.51	22,572.52	81.9
Cars, number.....	94,016	83,641	66,784	40.8
Passenger.....	76,162	70,016	60,290	26.3
All other.....	17,854	13,625	6,494	174.9
Electric locomotives.....	277	117	3	.....
Persons employed.....	282,461	³ 221,429	⁴ 140,769	100.7
Salaried employes.....	23,271	11,700	7,128	226.5
Wage earners (average number).....	⁴ 259,190	209,729	133,641	93.9
Power:				
Horsepower, total.....	3,665,051	2,519,823	1,359,285	169.6
Steam and gas engines (including turbines)—				
Number.....	2,312	3,409	2,652	—12.8
Horsepower.....	3,193,744	2,427,862	1,310,132	143.8

¹ A minus sign (—) denotes decrease.

² Includes track lying outside the United States, namely, 1912, 31.91 miles; 1907, 27.52 miles; and 1902, 4.20 miles and exclusive of track not operated.

³ For 939 companies in 1907 and for 797 companies in 1902.

⁴ Number employed September 16, 1912.

TABLE NO I—*Concluded*

	1912	1907	1902	Per cent of in- crease: ¹ 1902-1912
Power—<i>Concluded</i>				
Horsepower, total— <i>Concl'd</i>				
Water wheels—				
Number.....	383	228	159	140.9
Horsepower.....	471,307	91,961	49,153	858.9
Kilowatt capacity of dyna- mos.....	2,508,066	1,723,416	898,362	179.2
Output of stations, kilowatt hours.....	6,052,699,008	4,759,130,100	2,261,484,397	167.6
Current purchased, kilowatt hours.....	2,967,318,781	(⁶)	(⁶)	.....
Passengers carried.....	12,135,341,716	9,533,080,766	5,836,615,296	107.9
Revenue.....	9,545,554,667	7,441,114,508	4,774,211,904	99.9
Transfer.....	2,423,918,024	1,995,658,101	1,062,493,392	128.2
Free.....	165,869,025	96,308,157	(⁶)	.....
Car mileage (passenger, ex- press, freight, etc.).....	1,921,620,074	1,617,731,300	1,144,430,466	67.9
Condensed income account of operating companies:				
Gross income.....	\$585,930,517	\$429,744,254	\$250,504,627	133.9
Operating revenues.....	\$507,511,704	\$418,187,858	\$247,553,999	129.2
Transportation reve- nues.....	\$520,184,773	\$390,276,347	\$235,997,005	120.4
Nontransportation revenues ⁷	\$47,326,931	\$27,911,511	\$11,556,994	309.5
Income from other sources	\$18,418,813	\$11,556,396	\$2,950,628	524.2
Operating expenses.....	\$332,896,356	\$251,309,252	\$142,312,597	133.9
Gross income less operating expenses.....	\$253,034,161	\$178,435,002	\$108,192,030	133.9
Deductions from income (taxes and fixed charges).....	\$191,123,408	\$138,094,716	\$77,595,053	146.3
Net income.....	\$61,910,753	\$40,340,286	\$30,596,977	102.3
Dividends (operating com- panies).....	\$51,650,117	\$26,454,732	\$15,882,110	225.2
Surplus.....	\$10,260,636	\$13,885,554	\$14,714,867	—30.3

⁸ Figures not available.⁶ For 939 companies in 1907 and for 799 companies in 1902.⁷ Income from sale of current included: In 1912, \$36,500,030; in 1907, \$20,093,302; and in 1902, \$7,703,574.

TABLE NO. II.—GROWTH OF THE ELECTRIC TRACTION INDUSTRY IN THE UNITED STATES

Being a comparison between the number of operating companies, miles of track operated, revenue cars owned, revenue car miles and number of employees, reported in 1902, 1907, and 1912. Similar comparisons are shown for each of the nine geographical districts into which the Census Department divides the United States for purposes of enumeration.

DISTRICT	Number of operating companies			Miles of track operated			Revenue cars owned			Revenue car miles			Number of employees		
	1912	1907	1902	1912	1907	1902	1912	1907	1902	1907	1902	1902	1907	1912	1902
United States.....	975	945	817	41,064	34,381	22,572	83,956	75,685	61,404	1,021,620,074	1,617,731,300	1,144,430,466	282,461	221,429	140,769
New England.....	91	118	137	5,294	4,874	4,008	11,958	11,111	10,184	101,451,066	176,730,085	145,300,636	34,224	28,146	20,867
Middle Atlantic.....	246	247	210	10,043	8,830	6,152	27,456	25,473	21,581	663,588,817	571,192,811	420,186,221	93,811	79,457	55,061
East North Central.....	222	220	177	11,810	10,336	6,075	19,042	18,184	14,498	474,239,256	403,817,479	274,890,992	66,721	51,038	39,893
West North Central.....	85	73	58	3,099	2,598	1,741	5,804	4,843	4,576	152,346,875	127,231,467	91,956,441	20,030	14,892	9,512
South Atlantic.....	107	100	75	2,962	2,294	1,670	6,410	5,646	4,418	124,591,004	105,825,575	80,327,031	19,958	15,044	9,839
East South Central.....	45	40	34	1,287	1,065	768	2,401	2,157	1,828	58,056,424	49,264,247	32,602,906	9,375	6,935	3,780
West South Central.....	79	50	32	1,376	841	554	2,275	1,712	1,211	61,616,556	46,122,447	30,543,662	8,303	6,118	2,951
Mountain.....	40	28	18	1,007	601	409	1,304	909	629	30,149,835	23,372,469	13,859,274	4,408	3,001	1,560
Pacific.....	60	63	49	4,186	3,032	1,195	7,306	5,650	2,479	165,580,241	114,174,723	54,672,313	24,551	16,808	7,360

TABLE NO. III.—PERCENTAGE GROWTH OF THE ELECTRIC TRACTION INDUSTRY IN THE UNITED STATES FOR THE FIVE AND TEN YEAR PERIODS SINCE 1902

DISTRICT	Number of operating companies in per cent of 1902		Miles track operated in per cent of 1902		Revenue cars owned in per cent of 1902		Revenue car miles in per cent of 1902		Number of employes in per cent of 1902	
	1912	1907	1912	1907	1912	1907	1912	1907	1912	1907
United States.....	119.3	115.7	181.9	152.3	136.7	123.3	167.9	141.4	200.7	157.3
New England.....	66.4	86.1	132.1	121.6	117.4	109.1	131.8	121.6	164.0	134.9
Middle Atlantic.....	112.3	112.8	163.2	143.5	127.2	118.0	157.9	135.9	170.4	144.3
East North Central.....	125.4	124.3	193.2	169.1	131.3	125.4	172.5	146.9	223.2	170.7
West North Central.....	146.6	125.9	178.0	144.1	126.8	105.8	165.7	138.4	220.0	156.6
South Atlantic.....	142.7	133.3	177.4	137.4	145.1	127.8	155.1	131.7	202.8	152.9
East South Central.....	132.4	117.6	167.6	138.7	131.3	118.0	177.6	150.7	248.0	183.5
West South Central.....	246.9	156.3	248.4	151.8	187.9	141.4	201.7	151.0	284.4	207.3
Mountain.....	222.2	155.6	246.2	146.9	207.3	144.5	217.5	168.6	288.3	192.4
Pacific.....	122.4	128.6	350.3	253.7	294.7	227.9	302.9	208.8	333.6	228.4

TABLE NO. IV.—INCREASE IN THE USE OF ELECTRIC RAILWAYS OF THE UNITED STATES AS COMPARED WITH STEAM RAILWAYS

DISTRICT	Number of revenue passengers per 1,000 population			Number of revenue passengers per 1,000 population in per cent of 1902	
	1912	1907	1902	1912	1907
United States.....	100,000	85,500	60,200	166.1	142.0
New England.....	156,000	140,000	111,000	140.5	126.1
Middle Atlantic.....	174,500	156,500	121,500	143.6	128.8
East North Central.....	115,500	91,250	60,200	191.8	151.5
West North Central.....	66,250	54,750	33,300	198.9	164.4
South Atlantic.....	49,250	41,750	27,600	178.4	151.2
East South Central.....	31,400	27,100	15,250	205.9	177.7
West South Central.....	29,400	23,800	13,200	222.7	180.3
Mountain.....	54,500	48,250	33,100	164.6	145.7
Pacific.....	159,000	133,500	87,600	181.5	152.4
Steam roads (United States).....	10,510	10,020	8,210	128.0	124.2

TABLE NO. V.—INCOME ACCOUNT OF THE ELECTRIC RAILWAYS OF THE UNITED STATES IN CENTS PER REVENUE CAR MILE

ITEM	United States				New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
	1902	1907	1912	1912									
Year.....	799	939	975	91	246	222	85	107	45	79	40	60	
Number of companies.....													
Operating revenues.....	21.62	25.84	29.52	29.51	28.88	28.52	29.46	31.67	29.43	27.64	36.82	32.91	
Transportation.....	20.62	24.12	27.10	28.27	27.07	26.28	27.57	25.53	24.46	24.23	27.50	26.13	
Other revenues.....	1.00	1.72	2.42	1.24	1.21	2.24	1.89	6.14	4.97	3.41	9.32	6.78	
Operating expenses.....	12.43	15.53	17.32	19.49	16.37	16.69	17.06	17.33	17.00	18.86	21.31	19.63	
Way and structures.....	1.31	2.07	2.43	2.88	2.49	2.06	2.88	2.44	2.25	1.91	2.84	3.08	
Equipment.....	1.45	1.94	2.68	2.49	1.84	2.29	1.98	1.64	2.08	1.87	2.25	2.40	
Traffic.....	1.09	1.14	1.44	1.44	1.07	1.11	1.13	1.18	1.10	1.10	1.32	1.35	
Conducting transportation.....	7.43	8.81	9.87	10.94	9.26	10.05	9.69	9.95	8.91	9.56	12.52	10.92	
Superintendence.....	2.23	2.72	3.37	3.40	2.43	2.77	3.24	3.42	3.36	3.44	5.26	3.70	
Power.....	2.10	2.78	3.15	3.21	2.71	3.35	3.44	3.52	3.36	3.44	6.08	3.59	
Car operation.....	5.10	5.76	6.35	7.33	6.12	6.43	6.13	5.71	5.36	5.74	7.13	7.64	
General and miscellaneous.....	2.15	2.60	2.83	3.33	2.66	2.53	2.03	3.37	3.66	3.31	3.38	2.63	
Net revenues.....	9.19	10.31	12.20	10.05	12.51	11.84	11.50	13.34	12.43	10.78	15.51	13.26	
Miscellaneous income.....	26	72	106	10.57	13.56	8.4	11.20	1.54	8.3	2.86	5.81	1.09	
Gross income less operating expenses.....	9.45	11.03	13.16	10.57	13.57	12.76	11.70	15.87	13.25	13.64	18.32	14.35	
Deductions from income.....	6.78	8.54	9.94	7.35	11.95	0.68	7.37	10.66	8.14	8.25	12.37	10.74	
Taxes and rentals.....	3.45	4.64	4.94	4.11	6.53	4.29	5.38	7.15	5.03	5.07	8.71	7.64	
(1) Interest.....	3.35	3.94	5.16	4.04	6.33	5.30	5.38	7.21	5.03	5.07	8.71	7.64	
Net income.....	3.69	3.94	3.22	3.22	2.12	3.08	4.33	5.21	5.21	5.30	5.05	3.64	
Dividends.....	1.30	1.49	3.68	3.05	2.13	2.52	2.15	3.56	3.24	3.91	5.05	3.64	
Reserves and surplus.....	1.28	1.86	1.54	1.10	*.01	*.56	2.18	1.65	1.87	1.48	1.31	1.17	

Note.—The figures below include those for both operating and lessor companies except for the United States, which are for operating companies only.

(1) Interest bearing debt — millions.....	1,268.61	1,909.4	143.1	951.3	623.4	175.9	218.8	75.2	76.2	54.9	307.8
(2) Capital stock — millions.....	63,740.7	98,025.3	6,478.1	38,941.7	28,151.0	8,195.6	8,864.5	3,440.4	3,741.9	2,626.0	12,820.2
(3) Dividends — millions.....	983.0	1,543.3	1,957.3	209.4	712.0	554.3	159.3	196.6	57.2	86.5	48.2
(4) Reserves and surplus — millions.....	15,882.1	26,454.7	51,650.1	7,608.3	27,707.8	14,574.4	3,336.8	5,475.4	2,460.2	2,639.4	1,400.3
(5) Rate per cent.....	1.62	1.72	2.64	3.63	3.89	2.73	2.10	2.79	4.30	3.05	2.90

* Deficit.

In Explanation—In 1902, $1\frac{1}{2}$ per cent and in 1907, $2\frac{1}{2}$ per cent of the total operating expenses were undistributed. In order to make comparisons between groups of accounts, this undistributed amount has been somewhat arbitrarily classified as follows: 1902, Way and Structures, 60 per cent, Power, 40 per cent; 1907, Way and Structures, 76 per cent, Power, 24 per cent. There will be noted at the bottom of Table V figures showing the rate of return on funded debt and mortgages which is, as indicated, roughly 5 per cent. There are also shown figures indicating the capital stock issued, together with the dividends paid thereon, varying from 2.10 per cent in the West North Central states to 4.30 per cent in the East South Central states, with a mean figure of 2.64 per cent for the country as a whole.

It is of interest to combine the figures shown in the Census bulletin as follows, in order to avoid the criticism that the funded debt of the electric railway companies covers their whole value, and that the capital stock is not entitled to any dividends.

Item	Millions of Dollars	
	1907	1912
Cost of Construction, Equipment and Real Estate	2719.1	3867.2
Securities owned	329.8	386.0
Cash, Current Assets, Funds, etc.	172.2	331.7
TOTAL	3221.1	4584.9
Funded Debt	1268.6	1999.4
DIFFERENCE	1952.5	2585.5
Dividend Rate on this basis.	1.35%	2.00%
CAPITAL STOCK	1543.3	1957.3
Dividend Rate on this basis.	1.72%	2.64%

It appears from these figures that if to the cost of the physical plant be added the floating assets necessary to operate the business and to this, the cost of securities owned, the revenue from which is included under the head of "miscellaneous income," and from the total thus obtained the amount of the funded debt be subtracted there is left an amount substantially in excess of the capital stock issued.

TABLE NO. VI.—OPERATING EXPENSES OF THE ELECTRIC RAILWAYS OF THE UNITED STATES, IN CENTS PER REVENUE CAR MILE BY GROUPS OF ACCOUNTS

DISTRICT	Total			Way and structures			Equipment			Traffic		
	1912	1907		1912	1907		1912	1907		1912	1907	
		1912	1907		1912	1907		1912	1907		1912	1907
United States.....	17.32	15.53	12.43	2.41	2.07	1.31	2.08	1.94	1.45	.14	.11	.09
New England.....	19.49	17.81	15.74	2.88	2.58	2.00	2.49	2.20	1.81	.14	.20	.14
Middle Atlantic.....	16.37	14.85	12.76	2.29	1.74	1.17	2.80	1.97	1.32	.07	.05	.08
East North Central.....	16.60	14.90	11.32	2.86	1.91	1.12	1.84	1.71	1.37	.11	.07	.07
West North Central.....	17.90	14.31	11.05	2.88	1.51	1.06	2.29	1.34	1.35	.11	.14	.11
South Atlantic.....	17.33	15.38	10.09	2.44	2.05	1.09	1.86	1.64	1.06	.18	.10	.14
West Atlantic.....	17.00	16.38	11.35	2.25	2.72	1.78	2.08	1.61	1.43	.10	.15	.10
East South Central.....	16.80	14.76	9.70	1.91	2.12	1.53	1.97	1.61	1.23	.19	.15	.09
West South Central.....	21.31	17.54	14.72	2.84	2.74	2.29	2.45	2.15	1.67	.32	.34	.34
Mountain.....	19.05	18.09	13.90	3.08	2.92	1.71	2.40	2.90	1.54	.35	.17	.13
Pacific.....												

TABLE NO. VI.—(Concluded)

DISTRICT	Conducting transportation												General and miscellaneous
	Total			Superintendence of transportation			Power			Operation of cars			
	1912	1907	1902	1912	1907	1902	1912	1907	1902	1912	1907	1902	
United States.....	9.87	8.81	7.43	.37	.22	.23	3.15	2.81	6.35	5.10	2.82	2.60	2.15
New England.....	10.94	10.04	9.20	.40	.26	.51	3.21	3.19	7.33	6.59	3.04	2.79	2.59
Middle Atlantic.....	9.26	8.52	7.05	.43	.24	.25	2.71	2.51	6.12	5.77	2.66	2.57	2.34
East North Central.....	10.05	8.53	6.74	.27	.17	.12	3.35	2.94	2.86	4.58	5.50	2.62	2.02
West North Central.....	9.69	8.45	6.58	.32	.23	.13	3.24	2.71	1.90	6.13	4.55	2.97	2.57
South Atlantic.....	9.05	8.51	6.17	.42	.21	.14	3.52	3.26	2.22	5.71	3.81	3.37	2.52
East South Central.....	8.91	8.67	6.12	.39	.31	.32	3.16	3.17	1.89	5.36	5.19	3.01	2.73
West South Central.....	9.56	8.34	5.91	.35	.18	.16	3.44	3.01	1.73	5.77	5.15	3.23	2.12
Mountain.....	12.52	9.77	8.61	.28	.22	.17	5.26	3.27	2.68	6.98	4.76	3.38	2.54
Pacific.....	10.92	10.12	8.87	.40	.23	.17	3.39	2.89	2.43	7.13	7.00	2.90	2.52

TABLE NO. VII.—OPERATING EXPENSES OF THE ELECTRIC RAILWAYS OF THE UNITED STATES IN CENTS PER DOLLAR OF TRANSPORTATION REVENUE BY GROUPS OF ACCOUNTS

District	Total			Way and structures			Equipment			Traffic		
	1912	1907		1912	1907		1912	1907		1912	1907	
		1912	1907		1912	1907		1912	1907		1912	1907
United States.....	63.99	64.39	60.34	8.91	8.55	6.32	7.70	8.06	7.07	.50	.44	.47
New England.....	68.94	71.56	71.57	10.18	10.37	9.09	8.82	8.84	8.23	.51	.80	.64
Middle Atlantic.....	59.17	59.65	56.19	8.17	6.99	5.16	7.59	7.93	6.69	.28	.19	.33
East North Central.....	63.19	65.22	59.85	7.85	8.36	5.92	7.01	7.75	7.24	.44	.31	.37
West North Central.....	65.15	56.95	57.80	10.46	5.95	5.53	8.30	6.54	7.04	.46	.57	.57
South Atlantic.....	67.87	69.70	63.22	9.57	12.02	6.73	6.62	6.99	6.56	.70	.74	.86
East South Central.....	69.49	70.83	63.03	9.21	11.76	9.87	8.49	6.96	6.81	.42	.66	.54
West South Central.....	69.59	68.69	63.55	7.90	9.85	6.75	7.72	7.79	8.00	.78	1.15	.61
Mountain.....	77.50	70.90	65.58	10.32	11.06	10.20	8.20	8.69	6.40	1.17	1.36	2.35
Pacific.....	69.86	72.71	61.49	10.95	11.34	7.51	8.55	11.56	6.80	1.25	.65	.57

TABLE NO. VII — (Concluded)

DISTRICT	Conducting transportation												General and miscellaneous			
	Total *			Superintendence of transportation			Power			Operation of cars			1912	1907	1902	
	1912	1907	1902	1912	1907	1902	1912	1907	1902	1912	1907	1902				
United States.....	36.47	36.51	36.02	1.37	.90	1.10	11.63	11.65	10.19	23.47	23.96	24.73	10.41	10.83	10.46	
New England.....	38.67	40.34	41.83	1.40	1.04	2.32	11.35	12.82	11.87	25.92	26.48	27.64	10.76	11.21	11.78	
Middle Atlantic.....	33.46	34.20	33.71	1.57	.95	1.11	9.80	10.09	8.55	22.09	23.16	24.05	9.57	10.34	10.30	
East North Central.....	38.22	37.33	35.64	1.04	.74	.63	12.73	12.52	10.79	24.45	24.07	24.22	9.67	11.47	10.68	
West North Central.....	35.17	33.64	34.42	1.15	.91	.70	11.77	10.77	9.95	22.25	21.96	23.77	10.76	10.25	10.24	
South Atlantic.....	37.76	38.56	38.27	1.63	.93	.85	13.79	14.76	13.81	22.34	22.87	23.61	13.22	11.39	10.80	
East South Central.....	36.43	37.51	34.03	1.58	1.36	1.79	12.02	10.51	13.69	21.93	21.73	22.46	14.94	13.94	11.78	
West South Central.....	39.43	38.76	38.68	1.43	.83	.63	14.20	14.00	11.36	23.80	23.93	26.69	13.76	11.14	9.51	
Mountain.....	45.55	39.52	38.36	1.02	.90	.76	19.12	13.23	11.93	25.41	25.39	25.67	13.26	10.27	8.27	
Pacific.....	38.79	39.37	39.06	1.41	.90	.75	12.06	11.26	10.68	25.32	27.21	27.63	10.32	10.79	7.55	

TABLE NO. VIII.—PERCENTAGE RELATION OF OPERATING EXPENSES PER REVENUE CAR MILE AND PER DOLLAR OF TRANSPORTATION REVENUE — 1912 AND 1907 IN COMPARISON WITH 1902

District	Total		Way and structures		Equipment		Traffic	
	1912	1907	1912	1907	1912	1907	1912	1907
United States.....	139.3 106.0	124.9 106.7	183.9 141.0	158.0 135.0	143.3 109.0	133.8 114.0	155.8 106.2	122.3 93.7
New England.....	123.8 96.5	113.1 99.9	144.0 112.0	129.0 114.0	137.5 107.1	121.5 107.4	100.0 86.0	143.0 125.0
Middle Atlantic.....	128.3 105.2	116.4 106.0	195.7 158.0	148.7 135.5	137.5 113.4	139.5 118.5	87.7 85.0	62.5 57.6
East North Central.....	146.6 105.5	131.6 109.0	183.9 132.6	170.5 141.1	134.4 96.8	139.2 107.1	157.0 119.0	100.0 83.7
West North Central.....	162.5 112.8	129.5 98.6	272.0 189.0	142.2 107.5	170.0 117.8	121.5 92.9	118.3 81.0	127.2 100.0
South Atlantic.....	171.7 107.3	152.4 110.2	224.0 142.2	243.0 178.5	159.5 100.9	145.2 106.5	128.5 81.4	114.2 86.1
East South Central.....	149.8 110.1	144.3 112.1	126.3 93.5	152.9 119.0	169.1 124.7	131.0 102.2	100.0 77.7	150.0 122.0
West South Central.....	173.8 109.5	152.4 108.0	185.5 117.0	206.0 146.0	153.3 96.5	137.0 97.3	211.0 138.0	278.0 188.5
Mountain.....	144.8 118.0	119.1 108.0	124.0 101.1	119.5 108.2	156.1 128.1	149.3 135.9	61.6 49.7	65.5 57.9
Pacific.....	140.7 113.8	133.9 118.2	180.0 145.8	170.5 151.0	150.5 125.8	192.0 170.0	269.0 219.0	130.8 114.0

NOTE.—Each figure shows the percentage relation of a particular item to the corresponding item in 1902. Top figures in each group are based on revenue car miles; bottom figures on dollars of transportation revenue.

TABLE No. VIII — (Concluded)

DISTRICT	Conducting transportation										General and miscellaneous	
	Total		Superintendence of transportation		Power		Operation of cars					
	1912	1907	1912	1907	1912	1907	1912	1907				
United States.....	132.8	118.6	161.0	95.7	150.0	133.8	124.5	113.2	131.0	121.0		
	101.2	101.3	124.5	82.0	114.1	114.3	94.9	96.8	99.5	103.5		
New England.....	118.9	109.1	78.4	51.0	123.0	122.2	120.5	108.1	117.5	107.8		
	92.5	96.4	60.4	44.9	95.5	108.0	93.6	96.0	91.4	95.2		
Middle Atlantic.....	121.1	111.4	172.0	96.1	140.0	129.1	112.0	105.8	113.6	110.0		
	99.2	101.4	141.5	85.5	114.5	117.9	92.0	96.2	93.2	100.4		
East North Central.....	149.1	126.5	225.0	141.8	117.0	71.4	117.0	83.4	125.7	129.8		
	107.2	104.7	105.0	117.5	118.0	116.1	101.0	99.5	96.6	107.5		
West North Central.....	147.2	128.4	246.1	177.0	170.5	142.5	134.5	121.0	152.5	131.0		
	102.2	97.7	104.5	130.0	118.1	108.2	93.7	92.5	104.8	99.9		
South Atlantic.....	156.4	137.9	300.0	150.0	158.6	147.0	149.5	132.2	194.7	145.5		
	98.7	100.7	192.0	109.5	99.9	107.0	94.6	97.0	122.5	105.5		
East South Central.....	145.5	141.6	122.0	96.8	167.0	167.5	137.1	132.8	172.5	152.2		
	107.0	110.1	88.2	76.0	94.5	77.0	97.5	96.8	127.0	118.4		
West South Central.....	161.7	141.1	350.0	180.0	198.5	174.0	141.5	126.1	230.0	165.6		
	101.9	106.2	227.0	132.0	125.0	123.0	89.5	89.5	144.8	117.1		
Mountain.....	145.4	113.5	164.8	129.4	196.2	132.0	121.0	100.0	182.0	136.5		
	118.7	103.0	134.0	118.5	160.0	110.8	98.8	98.8	148.0	124.0		
Pacific.....	123.1	114.1	235.0	135.0	139.5	119.0	113.6	111.5	169.5	147.3		
	99.3	100.8	188.0	120.0	113.2	105.5	91.5	98.4	136.6	129.0		

NOTE.— Each figure shows the percentage relation of a particular item to the corresponding item in 1902. Top figures in each group are based on revenue car miles; bottom figures on dollars of transportation revenue.

TABLE NO. IX.—RATE OF INCREASE OF VARIOUS ITEMS IN ELECTRIC TRACTION INDUSTRY OF UNITED STATES

ITEM	1912	1907	1902	Increase 1907 to 1912	Increase 1902 to 1907	Increase 1907 to 1912 in per cent of 1907	Increase 1902 to 1907	Relative rate of increase second five years to first five years
Number of companies.....	975	945	817	30	128	3.17	15.67	20.23
Miles of track.....	41,064	34,381	22,572	6,683	11,809	19.44	52.32	37.16
Cost of construction, etc.....	\$4,596,563,292	\$3,637,668,768	\$2,167,634,077	\$958,894,584	\$1,470,034,631	26.36	67.82	38.87
Number of revenue cars.....	83,956	75,685	61,404	8,271	14,281	10.93	23.26	46.99
Number of employees.....	282,461	221,429	140,769	61,032	80,660	27.56	57.30	48.10
Revenue car miles.....	1,921,620,074	1,617,731,300	1,144,430,466	303,888,774	473,300,834	18.78	41.35	45.42
Operating expenses.....	\$332,896,356	\$251,309,252	\$142,312,597	\$81,587,104	\$108,996,655	32.46	76.59	42.38
Revenue rides per annum per 1,000 population.....	100,000	85,500	60,200	14,500	25,300	16.96	42.03	40.35
Number of revenue passengers...	9,545,554,667	7,441,114,508	4,774,211,904	2,104,440,159	2,666,902,604	28.28	55.86	50.63

TABLE X.—OPERATING EXPENSES OF THE ELECTRIC RAILWAYS OF THE UNITED STATES BY PRIMARY ACCOUNTS IN CENTS PER REVENUE CAR MILE AND IN CENTS PER DOLLAR OF TRANSPORTATION REVENUE

In this table, operating expenses for 1912 are divided into thirty-two primary accounts and, for the United States and each of the nine geographical districts, the amounts expended under each of these primary accounts are shown in cents per revenue car mile and also in cents per dollar of transportation revenue.

The wide variation between the amount spent per car mile in the various districts and charged under the headings in this classification indicates primarily the lack of uniformity in accounting methods with regard to certain items. It indicates of course in addition to this, something concerning the general level of prices in different parts of the country and also shows very clearly the difficulty of attempting to draw conclusions from a part of the financial statement as here shown. For instance, one district shows nearly $2\frac{1}{2}$ cents per car mile for power purchased and there are no doubt single companies which show figures considerably higher than this for this item, while other companies will show nothing under this head, but correspondingly larger amounts not only under the items "labor" and "fuel", etc. regularly charged to power, but also under the maintenance and depreciation charges against power generating stations and transmission lines. The amounts expended for purchased power should of course be distributed under these various heads and also under the accounts provided for handling interest and taxes in order to make the figures comparable with those of other companies manufacturing their own power. Considering operating expenses as a whole however the maximum figure per car mile is only 130 per cent of the minimum per car mile. Conductors and motormen show a correspondingly close agreement between the maximum and minimum amounts, the percentage relation being 132. The total cost of operating cars and the total of general and miscellaneous expenses each show a variation between maximum and minimum of 133 per cent of the smaller. Other items follow in the order and with the percentage relation indicated below:

Item	Maximum cost per car mile in per cent of minimum cost per car mile
Conducting transportation — total	141
Maintaining equipment — total	147
Maintenance of cars and locomotives	153
Superintendence of equipment	157
Way and structures — total	157
Superintendence of transportation	159
Maintenance of electric lines	162
Maintenance of way	172
Maintenance of electric equipment of cars and locomotives	188
Power — total	194
General expenses	196

The other items lie between this figure and that for the item "Other Operations" under "Power." Here the extreme variation is reached of 1.89 cents per car mile in the maximum group and .01 cents per car mile in the minimum group. This is of course entirely aside from electric railway operation and appears here only because of the difficulty of making proper separations of expenses in the case of certain companies generating power for purposes in addition to that of operating cars. It is interesting to note that the two highest variations aside from the one just mentioned are in the charges made for depreciation, under the heads of "Way and Structures" and "Equipment." Figures vary from .97 cents per car mile to .01 cents per car mile or a percentage relation of 9700 between the larger and the smaller for "Way and Structures" and in the case of depreciation of "Equipment" there is a variation from .63 to .01 cents per car mile or a percentage relation of 6300.

TABLE X.— OPERATING

	In cents per revenue car mile							
	United States	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central
Total.....	17.32	19.49	16.37	16.60	17.96	17.33	17.00	16.86
Way structures								
Total.....	2.41	2.88	2.29	2.06	2.88	2.44	2.25	1.91
Superintendence.....	.13	.15	.15	.12	.11	.13	.07	.12
Maintenance of way.....	1.57	2.08	1.55	1.45	1.42	1.22	1.42	1.21
Maintenance of electric lines.....	.29	.38	.26	.26	.24	.35	.39	.27
Buildings and structures.....	.14	.22	.17	.11	.11	.08	.09	.07
Depreciation of way and struc's..	.19	.01	.14	.04	.97	.27	.18	.12
Other operations.....	.09	.04	.02	.08	.03	.39	.10	.12
Equipment								
Total.....	2.08	2.49	2.09	1.84	2.29	1.69	2.08	1.87
Superintendence.....	.09	.11	.09	.08	.07	.08	.07	.10
Maintenance of power equipment	.20	.35	.19	.19	.17	.14	.22	.20
Maint. of cars and locomotives..	.88	1.06	.87	.87	.77	.69	.82	.86
Maint. of el. eq. of locomotives..	.51	.77	.53	.48	.48	.34	.42	.42
Misc. equipment expenses.....	.16	.16	.18	.13	.16	.11	.10	.13
Depreciation of equipment.....	.19	.01	.22	.03	.63	.19	.30	.08
Other operations.....	.05	.03	.01	.06	.01	.14	.15	.08
Traffic.....	.14	.14	.07	.11	.13	.18	.10	.19
Conducting transportation								
Total.....	9.87	10.94	9.26	10.05	9.69	9.65	8.91	9.56
Superintendence.....	.37	.40	.43	.27	.32	.42	.39	.35
Power								
Total.....	3.15	3.21	2.71	3.35	3.24	3.52	3.16	3.44
Power plant employees.....	.33	.45	.33	.33	.34	.36	.40	.41
Substation employees.....	.09	.06	.09	.11	.07	.09	.02	.07
Fuel for power.....	1.05	1.67	1.00	1.09	1.37	.85	1.27	1.38
Supplies and expenses.....	.11	.16	.10	.09	.10	.09	.20	1.10
Power purchased.....	1.28	.74	1.17	1.40	1.19	1.10	.65	1.04
Power exchanged—Bal.....	.01	.01	.01	.03				1.01
Other operations.....	.28	.12	.01	.30	.17	1.03	.62	.43
Operation of cars								
Total.....	6.35	7.33	6.12	6.43	6.13	5.71	5.36	.77
Conductors and motormen.....	5.11	5.71	4.91	5.06	5.10	4.79	4.54	5.10
Misc. transportation.....	1.24	1.62	1.21	1.37	1.03	.92	.82	5.67
General and miscellaneous								
Total.....	2.82	3.04	2.66	2.54	2.97	3.37	3.66	.33
General expenses.....	1.00	1.08	.85	.94	1.05	1.29	1.08	3.24
Other operations.....	.16	.07	.05	.14	.23	.62	.33	1.29
Undistributed accounts								
Injuries and damages.....	1.08	1.35	1.15	.85	1.19	.89	1.71	.21
Insurance.....	.16	.21	.15	.15	.21	.19	.14	1.22
Stationery and printing.....	.06	.07	.04	.06	.05	.08	.06	.10
Store and stable.....	.11	.13	.14	.07	.10	.09	.03	.08
Rent of tracks and terminals.....	.19	.08	.21	.28	.10	.12	.30	.18
Rent of equipment.....	.06	.05	.07	.05	.04	.09	.01	.01

EXPENSES FOR 1912

		In cents per dollar of transportation revenue									
Mountain	Pacific	United States	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
21.31	19.65	64.00	68.94	59.17	63.20	65.16	67.87	69.49	69.60	77.50	69.86
2.84	3.08	8.91	10.19	8.27	7.85	10.46	9.57	9.21	7.90	10.32	10.95
.19	.15	.50	.52	.54	.44	.40	.53	.30	.48	.70	.55
1.50	1.97	5.80	7.37	5.61	5.52	5.20	4.77	5.77	5.03	5.44	7.00
.27	.34	1.06	1.36	.94	.98	.86	1.37	1.62	1.10	.99	1.22
.17	.11	.51	.78	.61	.44	.39	.30	.35	.28	.63	.40
.10	.32	.71	.03	.51	.10	3.51	1.05	.74	.51	.36	1.12
.61	.19	.33	.13	.06	.31	.10	1.55	.43	.50	2.20	.66
2.25	2.40	7.70	8.82	7.59	7.01	8.31	6.62	8.49	7.72	8.20	8.54
.10	.10	.32	.41	.31	.30	.25	.32	.29	.41	.38	.34
.14	.12	.72	1.26	.69	.72	.61	.55	.90	.81	.52	.42
.87	1.05	3.26	3.71	3.16	3.27	2.80	2.71	3.36	3.55	3.14	3.74
.41	.49	1.90	2.73	1.92	1.84	1.73	1.31	1.72	1.74	1.51	1.70
.23	.19	.58	.57	.65	.51	.57	.42	.41	.54	.85	.68
.11	.35	.71	.04	.79	.12	2.31	.77	1.21	.35	.39	1.24
.39	.10	.21	.10	.07	.25	.04	.54	.60	.32	1.41	.36
.32	.35	.50	.50	.28	.45	.46	.70	.42	.78	1.16	1.26
12.52	10.92	36.47	38.67	33.46	38.22	35.17	37.76	36.43	39.44	45.55	38.79
.28	.40	1.37	1.38	1.57	1.05	1.15	1.03	1.58	1.43	1.02	1.41
5.26	3.39	11.63	11.37	9.80	12.73	11.77	13.79	12.92	14.21	19.12	12.06
.37	.06	1.22	1.61	1.20	1.27	1.24	1.40	1.64	1.68	1.33	.23
.13	.18	.35	.21	.33	.41	.24	.34	.10	.28	.47	.62
.92	.05	3.87	5.90	3.60	4.19	5.00	3.34	5.21	5.74	3.37	.19
.10	.05	.39	.59	.39	.36	.36	.35	.80	.42	.36	.16
1.85	2.37	4.72	2.63	4.24	5.34	4.31	4.32	2.65	4.29	6.73	8.41
.....	.07	.03	.02	.....	.01	.....	.....	.....	.02	.....	.27
1.89	.61	1.05	.41	.04	1.15	.62	4.04	2.52	1.78	6.86	2.18
6.98	7.13	23.47	25.92	22.09	24.44	22.25	22.34	21.93	23.80	25.41	25.32
5.98	5.68	18.88	20.20	17.72	19.25	18.52	18.74	18.58	21.05	21.73	20.16
1.00	1.45	4.59	5.72	4.37	5.19	3.73	3.60	3.35	2.75	3.68	5.16
3.38	2.90	10.42	10.76	9.57	9.67	10.76	13.22	14.94	13.76	12.27	10.32
1.67	1.14	3.68	3.83	3.08	3.55	3.79	5.04	4.41	5.14	6.02	4.06
.66	.39	.61	.22	.02	.53	.85	2.42	1.37	1.19	2.41	1.38
.54	.90	3.98	4.81	4.21	3.26	4.31	3.52	6.98	5.00	1.97	3.23
.16	.11	.61	.76	.54	.59	.75	.76	.57	.93	.58	.39
.08	.09	.21	.23	.15	.22	.19	.30	.24	.40	.29	.31
.07	.09	.39	.47	.51	.28	.35	.34	.12	.32	.27	.31
.11	.07	.71	.25	.80	1.06	.37	.48	1.43	.75	.41	.25
.09	.11	.23	.19	.26	.18	.15	.36	.02	.03	.32	.39

TABLE NO. XI.—OPERATING EXPENSES OF THE ELECTRIC RAILWAYS OF THE UNITED STATES IN CENTS PER REVENUE CAR MILE WITH SPECIAL REFERENCE TO LABOR COSTS

District	Operating expenses in cents per revenue car mile											
	Total						LABOR					
	Except labor			Total			Total			Salaries		
	1912	1907	1902	1912	1907	1902	1912	1907	1902	1912	1907	1902
United States.....	17.32	15.53	12.43	10.45	9.33	7.71	1.35	0.80	0.65	0.30	0.24	0.26
New England.....	19.49	17.80	15.75	12.16	10.96	9.39	1.22	0.86	0.88	0.24	0.26	0.32
Middle Atlantic.....	16.37	14.85	12.75	10.00	9.18	8.01	1.22	0.60	0.52	0.23	0.17	0.18
East North Central....	16.66	14.90	11.30	10.04	8.64	6.96	1.22	0.76	0.60	0.31	0.26	0.28
West North Central....	17.96	14.35	11.10	10.49	8.53	6.85	1.26	0.80	0.64	0.32	0.30	0.28
South Atlantic.....	17.33	15.35	10.20	10.23	8.95	6.26	1.79	1.13	0.74	0.45	0.36	0.33
East South Central....	17.00	16.40	11.60	10.03	8.35	6.08	1.64	0.94	0.68	0.51	0.33	0.35
West South Central....	16.86	14.80	11.25	9.28	8.23	6.20	1.46	0.85	0.65	0.36	0.25	0.39
Mountain.....	21.31	17.50	16.30	13.26	11.17	8.95	2.04	1.57	0.92	0.43	0.42	0.45
Pacific.....	19.65	18.75	13.95	11.82	12.04	9.78	2.01	1.29	0.85	0.30	0.23	0.32

TABLE No. XI — (Concluded)

DISTRICT	Operating expenses, in cents, per revenue car mile — concluded															
	LABOR — concluded															
	Salaries — concluded						Wages									
	Managers			Clerks			Total		Conductors			Motormen			Other	
	1912	1907	1902	1912	1907	1902	1912	1907	1902	1912	1907	1902	1912	1907	1902	1907
...																
United States	0.28	0.22	0.16	0.77	0.34	0.23	9.10	8.53	7.06	2.45	2.36	2.10	2.52	2.32	2.15	3.85
New England	0.27	0.22	0.23	0.71	0.38	0.33	10.94	10.10	8.51	2.77	2.75	2.52	2.88	2.77	2.54	4.58
Middle Atlantic	0.23	0.16	0.13	0.74	0.27	0.21	8.78	8.58	7.49	2.27	2.34	2.22	2.35	2.21	2.29	4.16
East North Central	0.30	0.22	0.15	0.61	0.28	0.23	8.82	7.88	6.30	2.44	2.23	1.93	2.51	2.16	1.88	4.03
West North Central	0.26	0.20	0.17	0.68	0.30	0.19	9.23	7.73	6.21	2.50	2.28	1.88	2.62	2.34	1.96	3.87
South Atlantic	0.44	0.34	0.17	0.90	0.43	0.24	8.44	7.52	5.52	2.39	2.07	1.59	2.38	2.13	1.62	4.11
East South Central	0.33	0.27	0.16	0.80	0.34	0.17	8.39	7.41	5.40	2.21	2.13	1.18	2.29	2.20	1.82	3.47
West South Central	0.38	0.32	0.10	0.82	0.28	0.16	7.82	7.38	5.55	2.39	2.16	1.63	2.54	2.28	1.89	3.88
Mountain	0.49	0.40	0.17	1.12	0.66	0.30	11.22	9.60	8.03	2.95	2.80	2.53	2.95	2.79	2.61	4.01
Pacific	0.27	0.34	0.24	1.44	0.72	0.29	9.81	10.75	8.93	2.84	2.83	2.72	2.80	2.82	2.74	5.10

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